SAN ANTONIO
RIVER AUTHORITY

UT-SALA-NPDES-DMR-CORR

August 12, 2019

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (7017 3380 0000 7514 2059)

Executive Director
Texas Commission on Environmental Quality
Attn: Water Quality Division
Application Review and Processing Team (MC148)
P.O. Box 13087
Austin, Texas 78711-3087

Reference: Salitrillo Wastewater Treatment Plant,
TPDES Permit No. WQ0010749-001 and NPDES No.TX0053074;
Tax No. 1-74-6011311-5

Subject: Domestic Wastewater Permit Renewal Application

Dear Madam/Sir:

Enclosed are one original and three copies of a permit renewal application for the above referenced plant. An application fee in the amount of $2,015.00 has been sent under separate cover to the TCEQ Revenues Section (MC 214). A copy of payment submittal is included as one of the attachments to the application.

If you have any questions pertaining to this matter, please contact me at (210) 302-4200.

Sincerely,

DANIEL FLORES
Utilities Operations Superintendent

DF:ddv

Enclosure

100 East Guenther St. ☆ San Antonio, Texas 78204 ☆ www.sara-tx.org
(210) 227-1373 ☆ (866) 345-7272 ☆ Fax (210) 227-4323

Salitrillo Wastewater Discharge Permit Amendment 08/2019
TPDES No. WQ0010749-001 (EPA I.D. TX0053074)

Table of Contents

Part I Domestic Administrative Report
- Domestic Administrative Report 1.0
- Domestic Administrative Report 1.1
- Supplemental Permit Information Form

Part II Domestic Technical Report
- Domestic Technical Report 1.0
- Domestic Technical Report 1.1
- Domestic Worksheet 2.0- Receiving Waters
- Domestic Worksheet 4.0
- Domestic Worksheet 5.0
- Domestic Worksheet 6.0-Industrial Waste Contribution

Part III Attachments

Attachment 1 Copy of Check
Reference: Domestic Administrative Report 1.0
Page 2

Attachment 2 Core Data Form
Reference: Domestic Administrative Report 1.0
Page 4 Section 3 C

Attachment 3 Original USGS Map
Reference: Domestic Administrative Report 1.0
Page 12, Section 13

Attachment 4 USGS Map and General Location Map
Reference: Supplemental Permit Information Form
Page 17, Item 5

Salitrillo Wastewater Discharge Permit Amendment 08/2019
TPDES No. WQ0010749-001 (EPA I.D. TX0053074)

Table of Contents
(Continued)

Attachment 5 Description of Treatment Process
Reference: Domestic Technical Report 1.0
Section 2 A

Attachment 6 Type and Dimension of Each Treatment Unit
Reference: Domestic Technical Report 1.0
Section 2 B

Attachment 7 Flow Diagram
Reference: Domestic Technical Report 1.0
Section 2 C

Attachment 8 Site Drawing
Reference: Domestic Technical Report 1.0
Section 3

Attachment 9 Pollutant Analyses of Treated Effluent
Reference: Domestic Technical Report 1.0
Section 7

Attachment 10 Pollutant Analyses Requirements
Reference: Domestic Technical Report 4.0

Attachment 11 Other Industrial User Information
Reference: Domestic Technical Report 6.0
Section 1 A

Attachment 12 Significant Industrial User Information
Reference: Domestic Technical Report 6.0
Section 3

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION CHECKLIST

Complete and submit this checklist with the application.

APPLICANT: San Antonio River Authority

PERMIT NUMBER: WQ0010749-001

Indicate if each of the following items is included in your application.

	Y	N		Y	N
Administrative Report 1.0	☒	☐	Original USGS Map	☒	☐
Administrative Report 1.1	☐	☒	Affected Landowners Map	☐	☒
SPIF	☒	☐	Landowner Disk or Labels	☐	☒
Core Data Form	☒	☐	Buffer Zone Map	☐	☒
Technical Report 1.0	☒	☐	Flow Diagram	☒	☐
Technical Report 1.1	☐	☒	Site Drawing	☒	☐
Worksheet 2.0	☒	☐	Original Photographs	☐	☒
Worksheet 2.1	☐	☒	Design Calculations	☐	☒
Worksheet 3.0	☐	☒	Solids Management Plan	☐	☒
Worksheet 3.1	☐	☒	Water Balance	☐	☒
Worksheet 3.2	☐	☒			
Worksheet 3.3	☐	☒			
Worksheet 4.0	☒	☐			
Worksheet 5.0	☒	☐			
Worksheet 6.0	☒	☐			
Worksheet 7.0	☐	☒			

For TCEQ Use Only

Segment Number _____ County _____
Expiration Date _____ Region _____
Permit Number _____

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

APPLICATION FOR A DOMESTIC WASTEWATER PERMIT ADMINISTRATIVE REPORT 1.0

If you have questions about completing this form please contact the Applications Review and Processing Team at 512-239-4671.

Section 1. Application Fees (Instructions Page 29)

Indicate the amount submitted for the application fee (check only one).

Flow	New/Major Amendment	Renewal
<0.05 MGD	$350.00 ☐	$315.00 ☐
≥0.05 but <0.10 MGD	$550.00 ☐	$515.00 ☐
≥0.10 but <0.25 MGD	$850.00 ☐	$815.00 ☐
≥0.25 but <0.50 MGD	$1,250.00 ☐	$1,215.00 ☐
≥0.50 but <1.0 MGD	$1,650.00 ☐	$1,615.00 ☐
≥1.0 MGD	$2,050.00 ☐	$2,015.00 ☒

Minor Amendment (for any flow) $150.00 ☐

Payment Information:

Mailed — Check/Money Order Number: 931973

Check/Money Order Amount: $8,130.00

Name Printed on Check: San Antonio River Authority

EPAY — Voucher Number: See Attachment 1

Copy of Payment Voucher enclosed? Yes ☐

Section 2. Type of Application (Instructions Page 29)

☐ New TPDES

☐ Major Amendment *with* Renewal

☐ Major Amendment *without* Renewal

☒ Renewal without changes

☐ New TLAP

☐ Minor Amendment *with* Renewal

☐ Minor Amendment *without* Renewal

☐ Minor Modification of permit

For amendments or modifications, describe the proposed changes:

For existing permits:

Permit Number: WQ0010749-001

EPA I.D. (TPDES only): TX0053074

Expiration Date: March 1, 2020

Section 3. Facility Owner (Applicant) and Co-Applicant Information (Instructions Page 29)

A. The owner of the facility must apply for the permit.

What is the Legal Name of the entity (applicant) applying for this permit?

San Antonio River Authority

(The legal name must be spelled exactly as filed with the Texas Secretary of State, County, or in the legal documents forming the entity.)

If the applicant is currently a customer with the TCEQ, what is the Customer Number (CN)? You may search for your CN on the TCEQ website at http://www15.tceq.texas.gov/crpub/

CN: 600790620

What is the name and title of the person signing the application? The person must be an executive official meeting signatory requirements in *30 TAC § 305.44.*

Prefix (Mr., Ms., Miss): Ms.

First and Last Name: Suzanne Scott

Credential (P.E, P.G., Ph.D., etc.):

Title: General Manager

B. Co-applicant information. Complete this section only if another person or entity is required to apply as a co-permittee.

What is the Legal Name of the co-applicant applying for this permit?

N/A

(The legal name must be spelled exactly as filed with the TX SOS, with the County, or in the legal documents forming the entity.)

If the co-applicant is currently a customer with the TCEQ, what is the Customer Number (CN)? You may search for your CN on the TCEQ website at: http://www15.tceq.texas.gov/crpub/

CN:

What is the name and title of the person signing the application? The person must be an executive official meeting signatory requirements in *30 TAC § 305.44.*

Prefix (Mr., Ms., Miss):

First and Last Name:

Credential (P.E, P.G., Ph.D., etc.):

Title:

Provide a brief description of the need for a co-permittee:

C. Core Data Form

Complete the Core Data Form for each customer and include as an attachment. If the customer type selected on the Core Data Form is **Individual**, complete **Attachment 1** of Administrative Report 1.0.

Attachment: 2

Section 4. Application Contact Information (Instructions Page 30)

This is the person(s) TCEQ will contact if additional information is needed about this application. Provide a contact for administrative questions and technical questions.

A. Prefix (Mr., Ms., Miss): Mr.

First and Last Name: Daniel Flores

Credential (P.E, P.G., Ph.D., etc.):

Title: Utilities Operations Superintendent

Organization Name: San Antonio River Authority

Mailing Address: 100 E. Guenther Street

City, State, Zip Code: San Antonio, TX 78204

Phone No.: (210) 302-4200 Ext.: Fax No.: (210) 661-9324

E-mail Address: danielf@sara-tx.org

Check one or both: ☒ Administrative Contact ☒ Technical Contact

B. Prefix (Mr., Ms., Miss): Mr.

First and Last Name: Sterling Lee

Credential (P.E, P.G., Ph.D., etc.):

Title: Utilities Operations Assistant Superintendent

Organization Name: San Antonio River Authority

Mailing Address: 100 E. Guenther Street

City, State, Zip Code: San Antonio, TX 78204

Phone No.: (210) 302-4200 Ext.: Fax No.: (210) 661-9324

E-mail Address: sterling@sara-tx.org

Check one or both: ☒ Administrative Contact ☒ Technical Contact

Section 5. Permit Contact Information (Instructions Page 30)

Provide two names of individuals that can be contacted throughout the permit term.

A. Prefix (Mr., Ms., Miss): Mr.

First and Last Name: Daniel Flores

Credential (P.E, P.G., Ph.D., etc.):

Title: Utilities Operations Superintendent

Organization Name: San Antonio River Authority

Mailing Address: 100 E. Guenther Street

City, State, Zip Code: San Antonio, TX 78204

Phone No.: (210) 302-4200 Ext.: Fax No.: (210) 661-9324

E-mail Address: danielf@sara-tx.org

B. Prefix (Mr., Ms., Miss): Ms.

First and Last Name: Amy Middleton

Credential (P.E, P.G., Ph.D., etc.):

Title: Utilities Manager

Organization Name: San Antonio River Authority

Mailing Address: 100 E. Guenther Street

City, State, Zip Code: San Antonio, TX 78204

Phone No.: (210) 302-4200 Ext.: Fax No.: (210) 661-9324

E-mail Address: amiddleton@sara-tx.org

Section 6. Billing Information (Instructions Page 30)

The permittee is responsible for paying the annual fee. The annual fee will be assessed to permits ***in effect on September 1 of each year.*** The TCEQ will send a bill to the address provided in this section. The permittee is responsible for terminating the permit when it is no longer needed (using form TCEQ-20029).

Prefix (Mr., Ms., Miss): Ms.

First and Last Name: Suzanne Scott

Credential (P.E, P.G., Ph.D., etc.):

Title: General Manager

Organization Name: San Antonio River Authority

Mailing Address: 100 E. Guenther Street

City, State, Zip Code: San Antonio, TX 78204

Phone No.: (210) 227-1373 Ext.: Fax No.: (210) 661-9324

E-mail Address: sbscott@sara-tx.org

Section 7. DMR/MER Contact Information (Instructions Page 31)

Provide the name and complete mailing address of the person delegated to receive and submit Discharge Monitoring Reports (EPA 3320-1) or maintain Monthly Effluent Reports.

Prefix (Mr., Ms., Miss): Mr.

First and Last Name: Daniel Flores

Credential (P.E, P.G., Ph.D., etc.):

Title: Utilities Operations Superintendent

Organization Name: San Antonio River Authority

Mailing Address: 100 E. Guenther Street

City, State, Zip Code: San Antonio, TX 78204

Phone No.: (210) 302-4200 Ext.: Fax No.: (210) 661-9324

E-mail Address: danielf@sara-tx.org

DMR data is required to be submitted electronically. Create an account at: https://www.tceq.texas.gov/permitting/netdmr/netdmr.html.

Section 8. Public Notice Information (Instructions Page 31)

A. Individual Publishing the Notices

Prefix (Mr., Ms., Miss): Mr.

First and Last Name: Daniel Flores

Credential (P.E, P.G., Ph.D., etc.):

Title: Utilities Operations Superintendent

Organization Name: San Antonio River Authority

Mailing Address: 100 E. Guenther Street

City, State, Zip Code: San Antonio, TX 78204

Phone No.: (210) 302-4200 Ext.: Fax No.: (210) 661-9324

E-mail Address: danielf@sara-tx.org

B. Method for Receiving Notice of Receipt and Intent to Obtain a Water Quality Permit Package

Indicate by a check mark the preferred method for receiving the first notice and instructions:

☒ E-mail Address

☐ Fax

☒ Regular Mail

C. Contact person to be listed in the Notices

Prefix (Mr., Ms., Miss): Mr.

First and Last Name: Daniel Flores

Credential (P.E, P.G., Ph.D., etc.):

Title: Utilities Operations Superintendent

Organization Name: San Antonio River Authority

Phone No.: (210) 302-4200 Ext.:

E-mail: danielf@sara-tx.org

D. Public Viewing Information

If the facility or outfall is located in more than one county, a public viewing place for each county must be provided.

Public building name: San Antonio Central Public Library

Location within the building: Wilson Plunkett/Government Documents Section

Physical Address of Building: 600 Soledad Street

City: San Antonio, TX 78205 County: Bexar

Contact Name:

Phone No.: (201) 207-2500 Ext.:

E. Bilingual Notice Requirements:

This information **is required** for **new, major amendment, and renewal applications**. It is not required for minor amendment or minor modification applications.

This section of the application is only used to determine if alternative language notices will be needed. Complete instructions on publishing the alternative language notices will be in your public notice package.

Please call the bilingual/ESL coordinator at the nearest elementary and middle schools and obtain the following information to determine whether an alternative language notices are required.

1. Is a bilingual education program required by the Texas Education Code at the elementary or middle school nearest to the facility or proposed facility?

   ☒ Yes ☐ No

   If **no**, publication of an alternative language notice is not required; **skip to** Section 9 below.

2. Are the students who attend either the elementary school or the middle school enrolled in a bilingual education program at that school?

   ☒ Yes ☐ No

3. Do the students at these schools attend a bilingual education program at another location?

   ☐ Yes ☒ No

4. Would the school be required to provide a bilingual education program but the school has waived out of this requirement under 19 TAC §89.1205(g)?

   ☐ Yes ☒ No

5. If the answer is yes to question 1, 2, 3, or 4, public notices in an alternative language are required. Which language is required by the bilingual program? Spanish

Section 9. Regulated Entity and Permitted Site Information (Instructions Page 33)

A. If the site is currently regulated by TCEQ, provide the Regulated Entity Number (RN) issued to this site. **RN**101514560

Search the TCEQ's Central Registry at http://www15.tceq.texas.gov/crpub/ to determine if the site is currently regulated by TCEQ.

B. Name of project or site (the name known by the community where located):

Salitrillo Creek Wastewater Treatment Facility

C. Owner of treatment facility: San Antonio River Authority

Ownership of Facility: ☒ Public ☐ Private ☐ Both ☐ Federal

D. Owner of land where treatment facility is or will be:

Prefix (Mr., Ms., Miss):

First and Last Name: San Antonio River Authority

Mailing Address: 100 E. Guenther Street

City, State, Zip Code: San Antonio, TX 78204

Phone No.: (210) 302-4200 E-mail Address: danielf@sara-tx.org

If the landowner is not the same person as the facility owner or co-applicant, attach a lease agreement or deed recorded easement. See instructions.

Attachment:

E. Owner of effluent disposal site:

Prefix (Mr., Ms., Miss): N/A

First and Last Name:

Mailing Address:

City, State, Zip Code:

Phone No.: E-mail Address:

If the landowner is not the same person as the facility owner or co-applicant, attach a lease agreement or deed recorded easement. See instructions.

Attachment:

F. Owner of sewage sludge disposal site (if authorization is requested for sludge disposal on property owned or controlled by the applicant):

Prefix (Mr., Ms., Miss): N/A

First and Last Name:

Mailing Address:

City, State, Zip Code:

Phone No.: E-mail Address:

If the landowner is not the same person as the facility owner or co-applicant, attach a lease agreement or deed recorded easement. See instructions.

Attachment:

Section 10. TPDES Discharge Information (Instructions Page 34)

A. Is the wastewater treatment facility location in the existing permit accurate?

☒ Yes ☐ No

If **no, or a new permit application**, please give an accurate description:

B. Are the point(s) of discharge and the discharge route(s) in the existing permit correct?

☒ Yes ☐ No

If **no, or a new or amendment permit application**, provide an accurate description of the point of discharge and the discharge route to the nearest classified segment as defined in 30 TAC Chapter 307:

City nearest the outfall(s): Converse

County in which the outfalls(s) is/are located: Bexar

Outfall Latitude: 29 deg 30 min 31 sec N Longitude: 98 deg 17 min 55 sec W

C. Is or will the treated wastewater discharge to a city, county, or state highway right-of-way, or a flood control district drainage ditch?

☐ Yes ☒ No

If **yes**, indicate by a check mark if:

☐ Authorization granted ☐ Authorization pending

For **new and amendment** applications, provide copies of letters that show proof of contact and the approval letter upon receipt.

Attachment:

D. For all applications involving an average daily discharge of 5 MGD or more, provide the names of all counties located within 100 statute miles downstream of the point(s) of discharge.

Bexar, Wilson, Karnes, and Goliad.

Section 11. TLAP Disposal Information (Instructions Page 36)

A. For TLAPs, is the location of the effluent disposal site in the existing permit accurate?

☐ Yes ☐ No

If **no, or a new or amendment permit application**, provide an accurate description of the disposal site location:

N/A

B. City nearest the disposal site:

C. County in which the disposal site is located:

D. Disposal Site Latitude: Longitude:

E. For **TLAPs**, describe the routing of effluent from the treatment facility to the disposal site:

F. For **TLAPs**, please identify the nearest watercourse to the disposal site to which rainfall runoff might flow if not contained:

Section 12. Miscellaneous Information (Instructions Page 37)

A. Is the facility located on or does the treated effluent cross American Indian Land?

☐ Yes ☒ No

B. If the existing permit contains an onsite sludge disposal authorization, is the location of the sewage sludge disposal site in the existing permit accurate?

☐ Yes ☐ No ☒ Not Applicable

If No, or if a new onsite sludge disposal authorization is being requested in this permit

application, provide an accurate location description of the sewage sludge disposal site.

C. Did any person formerly employed by the TCEQ represent your company and get paid for service regarding this application?

☐ Yes ☒ No

If yes, list each person formerly employed by the TCEQ who represented your company and was paid for service regarding the application:

D. Do you owe any fees to the TCEQ?

☐ Yes ☒ No

If **yes**, provide the following information:

Account number: Amount past due:

E. Do you owe any penalties to the TCEQ?

☐ Yes ☒ No

If **yes**, please provide the following information:

Enforcement order number: Amount past due:

Section 13. Attachments (Instructions Page 38)

Indicate which attachments are included with the Administrative Report. Check all that apply:

☐ Lease agreement or deed recorded easement, if the land where the treatment facility is located or the effluent disposal site are not owned by the applicant or co-applicant.

☒ Original full-size USGS Topographic Map with the following information:

- Applicant's property boundary
- Treatment facility boundary
- Labeled point of discharge for each discharge point (TPDES only)
- Highlighted discharge route for each discharge point (TPDES only)
- Onsite sewage sludge disposal site (if applicable)
- Effluent disposal site boundaries (TLAP only)
- New and future construction (if applicable)
- 1 mile radius information

See Attachment 3

- 3 miles downstream information (TPDES only)
- All ponds.

☐ Attachment 1 for Individuals as co-applicants

☒ Other Attachments. Please specify: Attachment 1 - Copy of Check. Att 2- Core Data Form. Att 3 - USGS map. Att 4 - USGS map (SPIF)

Section 14. Signature Page (Instructions Page 39)

If co-applicants are necessary, each entity must submit an original, separate signature page.

Permit Number: WQ0010749-001

Applicant: San Antonio River Authority

Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I further certify that I am authorized under 30 Texas Administrative Code § 305.44 to sign and submit this document, and can provide documentation in proof of such authorization upon request.

Signatory name (typed or printed): Suzanne B. Scott

Signatory title: General Manager

Signature: Suzanne B Scott Date: 7/16/19

(Use blue ink)

Subscribed and Sworn to before me by the said Suzanne Scott

on this 16 day of July, 2019.

My commission expires on the 17 day of March, 2021.

MELVA L. RAMIREZ
Notary Public, State of Texas
Comm. Expires 03-17-2021
Notary ID 128657480

Notary Public [SEAL]

Bexar
County, Texas

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

FOR AGENCIES REVIEWING DOMESTIC TPDES WASTEWATER PERMIT APPLICATIONS

TCEQ USE ONLY:

Application type: ____Renewal ____Major Amendment ____Minor Amendment ____New

County: _____ Segment Number: _____

Admin Complete Date: _____

Agency Receiving SPIF:

_____ Texas Historical Commission _____ U.S. Fish and Wildlife

_____ Texas Parks and Wildlife Department _____ U.S. Army Corps of Engineers

This form applies to TPDES permit applications only. (Instructions, Page 53)

The SPIF must be completed as a separate document. The TCEQ will mail a copy of the SPIF to each agency as required by the TCEQ agreement with EPA. If any of the items are not completely addressed or further information is needed, you will be contacted to provide the information before the permit is issued. Each item must be completely addressed.

Do not refer to a response of any item in the permit application form. Each attachment must be provided with this form separately from the administrative report of the application. The application will not be declared administratively complete without this form being completed in its entirety including all attachments.

The following applies to all applications:

1. Permittee: San Antonio River Authority

   Permit No. WQ00 10749-001 EPA ID No. TX 0053074

   Address of the project (or a location description that includes street/highway, city/vicinity, and county):

   9638 Schaefer Road Converse, TX 78109 in Bexar County

Provide the name, address, phone and fax number of an individual that can be contacted to answer specific questions about the property.

Prefix (Mr., Ms., Miss): Mr.

First and Last Name: Daniel Flores

Credential (P.E, P.G., Ph.D., etc.):

Title: Utilities Operations Superintendent

Mailing Address: 100 E. Guenther Street

City, State, Zip Code: San Antonio, TX 78204

Phone No.: (210) 302-4200 Ext.: Fax No.: (210) 661-9324

E-mail Address: danielf@sara-tx.org

2. List the county in which the facility is located: Bexar
3. If the property is publicly owned and the owner is different than the permittee/applicant, please list the owner of the property.

N/A

4. Provide a description of the effluent discharge route. The discharge route must follow the flow of effluent from the point of discharge to the nearest major watercourse (from the point of discharge to a classified segment as defined in 30 TAC Chapter 307). If known, please identify the classified segment number.

Discharged from plant to an unnamed ditch; thence to Salitrillo Creek; thence to Martinez Creek Soil Conservation Service Dam No. 6A Reservoir; thence to Salitrillo Creek; thence to Martinez Creek; thence to Lower Cibolo Creek in Segment No. 1902 of the San Antonio River Basin.

5. Please provide a separate 7.5-minute USGS quadrangle map with the project boundaries plotted and a general location map showing the project area. Please highlight the discharge route from the point of discharge for a distance of one mile downstream. (This map is required in addition to the map in the administrative report). See Attachment 4

Provide original photographs of any structures 50 years or older on the property. N/A

Does your project involve any of the following? Check all that apply.

- ☐ Proposed access roads, utility lines, construction easements
- ☐ Visual effects that could damage or detract from a historic property's integrity
- ☒ Vibration effects during construction or as a result of project design
- ☒ Additional phases of development that are planned for the future
- ☐ Sealing caves, fractures, sinkholes, other karst features

☐ Disturbance of vegetation or wetlands

6. List proposed construction impact (surface acres to be impacted, depth of excavation, sealing of caves, or other karst features):

Approximately two (2) acres will be impacted during construction of the Final Phase and the maximum depth of excavation is approximately twenty-five (25) feet. There are no caves or other karst features in the construction area.

7. Describe existing disturbances, vegetation, and land use:

The propose construction site is located next to existing treatment units. Vegetation includes grass, and no trees are in the impacted area.

THE FOLLOWING ITEMS APPLY ONLY TO APPLICATIONS FOR NEW TPDES PERMITS AND MAJOR AMENDMENTS TO TPDES PERMITS

8. List construction dates of all buildings and structures on the property:

Two oxidation ditches and office built in 1974. Headworks, two carousel aeration basins, and two final clarifiers built in 1984. One carousel aeration basin and one final clarifier built in 1999.

9. Provide a brief history of the property, and name of the architect/builder, if known.

Unknown.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

DOMESTIC WASTEWATER PERMIT APPLICATION

DOMESTIC TECHNICAL REPORT 1.0

The Following Is Required For All Applications

Renewal, New, And Amendment

Section 1. Permitted or Proposed Flows (Instructions Page 51)

A. Existing/Interim I Phase

Design Flow (MGD): 5.83

2-Hr Peak Flow (MGD): 14.694

Estimated construction start date: N/A

Estimated waste disposal start date: N/A

B. Interim II Phase

Design Flow (MGD): N/A

2-Hr Peak Flow (MGD): N/A

Estimated construction start date: N/A

Estimated waste disposal start date: N/A

C. Final Phase

Design Flow (MGD): 7.33

2-Hr Peak Flow (MGD): 18.33

Estimated construction start date: 2020

Estimated waste disposal start date: 2022

D. Current operating phase: Existing/Interim I Phase

Provide the startup date of the facility: 08/01/1999

Section 2. Treatment Process (Instructions Page 51)

A. Treatment process description

Provide a detailed description of the treatment process. **Include the type of**

treatment plant, mode of operation, and all treatment units. Start with the plant's head works and finish with the point of discharge. Include all sludge processing and drying units. **If more than one phase exists or is proposed in the permit, a description of *each phase* must be provided.** Process description:

See Attachment 5

Port or pipe diameter at the discharge point, in inches: 30 inches

B. Treatment Units

In Table 1.0(1), provide the treatment unit type, the number of units, and dimensions (length, width, depth) **of each treatment unit, accounting for *all* phases of operation.**

Table 1.0(1) - Treatment Units

Treatment Unit Type	Number of Units	Dimensions (L x W x D)
See Attachment 6		

C. Process flow diagrams

Provide flow diagrams for the existing facilities and **each** proposed phase of construction.

Attachment: 7

Section 3. Site Drawing (Instructions Page 52)

Provide a site drawing for the facility that shows the following:

- The boundaries of the treatment facility;
- The boundaries of the area served by the treatment facility;
- If land disposal of effluent, the boundaries of the disposal site and all storage/holding ponds; and
- If sludge disposal is authorized in the permit, the boundaries of the land application or disposal site.

Attachment: 8

Provide the name and a description of the area served by the treatment facility.

Cities of Converse, Universal City, and Live Oak, and portions of East Bexar County.

Section 4. Unbuilt Phases (Instructions Page 52)

Is the application for a renewal of a permit that contains an unbuilt phase or phases?

Yes ☒ No ☐

If yes, does the existing permit contain a phase that has not been constructed within five years of being authorized by the TCEQ?

Yes ☒ No ☐

If yes, provide a detailed discussion regarding the continued need for the unbuilt phase. Failure to provide sufficient justification may result in the Executive Director recommending denial of the unbuilt phase or phases.

Need for the unbuilt phase took longer than anticipated but will be built in the next few years. Current plant flow is nearing 90% of current permitted capacity of 5.83 MGD.

Section 5. Closure Plans (Instructions Page 53)

Have any treatment units been taken out of service permanently, or will any units be taken out of service in the next five years?

Yes ☐ No ☒

If yes, was a closure plan submitted to the TCEQ?

Yes ☐ No ☐

If yes, provide a brief description of the closure and the date of plan approval.

N/A

Section 6. Permit Specific Requirements (Instructions Page 53)

For applicants with an existing permit, check the *Other Requirements* or *Special Provisions* of the permit.

A. Summary transmittal

Have plans and specifications been approved for the existing facilities and each proposed phase?

Yes ☐ No ☒

If yes, provide the date(s) of approval for each phase: 1998

Provide information, including dates, on any actions taken to meet a requirement or provision pertaining to the submission of a summary transmittal letter. Provide a copy of an approval letter from the TCEQ, if applicable.

N/A

B. Buffer zones

Have the buffer zone requirements been met?

Yes ☒ No ☐

Provide information below, including dates, on any actions taken to meet the conditions of the buffer zone. If available, provide any new documentation relevant to maintaining the buffer zones.

N/A

C. Other actions required by the current permit

Does the *Other Requirements* or *Special Provisions* section in the existing permit require submission of any other information or other required actions? Examples include Notification of Completion, progress reports, soil monitoring data, etc.

Yes ☐ No ☒

If yes, provide information below on the status of any actions taken to meet the conditions of an *Other Requirement* or *Special Provision.*

D. Grit and grease treatment

1. Acceptance of grit and grease waste

Does the facility have a grit and/or grease processing facility onsite that treats and decants or accepts transported loads of grit and grease waste that are discharged directly to the wastewater treatment plant prior to any treatment?

Yes ☐ No ☒

If No, stop here and continue with Subsection E. Stormwater Management.

2. Grit and grease processing

Describe below how the grit and grease waste is treated at the facility. In your description, include how and where the grit and grease is introduced to the treatment works and how it is separated or processed. Provide a flow diagram showing how grit and grease is processed at the facility.

3. Grit disposal

Does the facility have a Municipal Solid Waste (MSW) registration or permit for grit disposal?

Yes ☐ No ☐

If No, contact the TCEQ Municipal Solid Waste team at 512-239-0000. Note: A registration or permit is required for grit disposal. Grit shall not be combined with treatment plant sludge. See the instruction booklet for additional information on grit disposal requirements and restrictions.

Describe the method of grit disposal.

4. Grease and decanted liquid disposal

Note: A registration or permit is required for grease disposal. Grease shall not be combined with treatment plant sludge. For more information, contact the TCEQ Municipal Solid Waste team at 512-239-0000.

Describe how the decant and grease are treated and disposed of after grit separation.

E. Stormwater management

1. Applicability

Does the facility have a design flow of 1.0 MGD or greater in any phase?

Yes ☒ No ☐

Does the facility have an approved pretreatment program, under 40 CFR Part 403?

Yes ☐ No ☒

If no to both of the above, then skip to Subsection F, Other Wastes Received.

2. MSGP coverage

Is the stormwater runoff from the WWTP and dedicated lands for sewage disposal currently permitted under the TPDES Multi-Sector General Permit (MSGP), TXR050000?

Yes ☒ No ☐

If yes, please provide MSGP Authorization Number and skip to Subsection F, Other Wastes Received:

TXR05 K745 or TXRNE

If no, do you intend to seek coverage under TXR050000?

Yes ☐ No ☐

3. Conditional exclusion

Alternatively, do you intend to apply for a conditional exclusion from permitting based TXR050000 (Multi Sector General Permit) Part II B.2 or TXR050000 (Multi Sector General Permit) Part V, Sector T 3(b)?

Yes ☐ No ☒

If yes, please explain below then proceed to Subsection F, Other Wastes Received:

4. Existing coverage in individual permit

Is your stormwater discharge currently permitted through this individual TPDES or TLAP permit?

Yes ☐ No ☒

If yes, provide a description of stormwater runoff management practices at the site that are authorized in the wastewater permit then skip to Subsection F, Other Wastes Received.

5. Zero stormwater discharge

Do you intend to have no discharge of stormwater via use of evaporation or other means?

Yes ☐ No ☒

If yes, explain below then skip to Subsection F. Other Wastes Received.

Note: If there is a potential to discharge any stormwater to surface water in the state as the result of any storm event, then permit coverage is required under the MSGP or an individual discharge permit. This requirement applies to all areas of facilities with treatment plants or systems that treat, store, recycle, or reclaim domestic sewage, wastewater or sewage sludge (including dedicated lands for sewage sludge disposal located within the onsite property boundaries) that meet the applicability criteria of above. You have the option of obtaining coverage under the MSGP for direct discharges, (recommended), or obtaining coverage under this individual permit.

6. Request for coverage in individual permit

Are you requesting coverage of stormwater discharges associated with your treatment plant under this individual permit?

Yes ☐ No ☒

If yes, provide a description of stormwater runoff management practices at the site for which you are requesting authorization in this individual wastewater permit and describe whether you intend to comingle this discharge with your treated effluent or discharge it via a separate dedicated stormwater outfall. Please also indicate if you intend to divert stormwater to the treatment plant headworks and indirectly discharge it to water in the state.

Note: Direct stormwater discharges to waters in the state authorized through this individual permit will require the development and implementation of a stormwater pollution prevention plan (SWPPP) and will be subject to additional monitoring and reporting requirements. Indirect discharges of stormwater via headworks recycling will require compliance with all individual permit requirements including 2-hour peak flow limitations. All stormwater discharge authorization requests will require additional information during the technical review of your application.

F. Discharges to the Lake Houston Watershed

Does the facility discharge in the Lake Houston watershed?
Yes ☐ No ☒

If yes, a Sewage Sludge Solids Management Plan is required. See Example 5 in the instructions.

G. Other wastes received including sludge from other WWTPs and septic waste

1. Acceptance of sludge from other WWTPs

Does the facility accept or will it accept sludge from other treatment plants at the facility site?
Yes ☐ No ☒

If yes, attach sewage sludge solids management plan. See Example 5 of the instructions.

In addition, provide the date that the plant started accepting sludge or is anticipated to start accepting sludge, an estimate of monthly sludge acceptance (gallons or millions of gallons), an estimate of the BOD_5 concentration of the sludge, and the design BOD_5 concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

Note: Permits that accept sludge from other wastewater treatment plants may be required to have influent flow and organic loading monitoring.

2. Acceptance of septic waste

Is the facility accepting or will it accept septic waste?

Yes ☐ No ☒

If yes, does the facility have a Type V processing unit?

Yes ☐ No ☐

If yes, does the unit have a Municipal Solid Waste permit?

Yes ☐ No ☐

If yes to any of the above, provide a the date that the plant started accepting septic waste, or is anticipated to start accepting septic waste, an estimate of monthly septic waste acceptance (gallons or millions of gallons), an estimate of the BOD_5 concentration of the septic waste, and the design BOD_5 concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

Note: Permits that accept sludge from other wastewater treatment plants may be required to have influent flow and organic loading monitoring.

3. Acceptance of other wastes (not including septic, grease, grit, or RCRA, CERCLA or as discharged by IUs listed in Worksheet 6)

Is the facility accepting or will it accept wastes that are not domestic in nature excluding the categories listed above?

Yes ☐ No ☒

If yes, provide the date that the plant started accepting the waste, an estimate how much waste is accepted on a monthly basis (gallons or millions of gallons), a description of the entities generating the waste, and any distinguishing chemical or other physical characteristic of the waste. Also note if this information has or has not changed since the last permit action.

Section 7. Pollutant Analysis of Treated Effluent (Instructions Page 58)

Is the facility in operation?

Yes ☒ No ☐

If no, this section is not applicable. Proceed to Section 8.

If yes, provide effluent analysis data for the listed pollutants. ***Wastewater treatment facilities*** complete Table 1.0(2). ***Water treatment facilities*** discharging filter backwash water, complete Table 1.0(3).

Note: The sample date must be within 1 year of application submission.

Table 1.0(2) - Pollutant Analysis for Wastewater Treatment Facilities

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
$CBOD_5$, mg/l	2	2	1	Comp	4/4/19, 7:00am
Total Suspended Solids, mg/l	2	2	1	Comp	4/4/19, 7:00am
Ammonia Nitrogen, mg/l	0.2	0.2	1	Comp	4/4/19, 7:00am
Nitrate Nitrogen, mg/l	5.9	5.9	1	Comp	4/4/19, 7:00am
Total Kjeldahl Nitrogen, mg/l	2	2	1	Comp	4/4/19, 7:00am
Sulfate, mg/l	91	91	1	Comp	4/4/19, 7:00am
Chloride, mg/l	160	160	1	Comp	4/4/19, 7:00am
Total Phosphorus, mg/l	2.24	2.24	1	Comp	4/4/19, 7:00am
pH, standard units	7.4 min	7.9 max	21	Grab	April 2019
Dissolved Oxygen*, mg/l	6.93 min	9.73max	29	Grab	April 2019
Chlorine Residual, mg/l	N/A	N/A	N/A	N/A	N/A
E.coli (CFU/100ml) freshwater	3	60	30	Grab	April 2019
Entercocci (CFU/100ml)	N/A	N/A	N/A	N/A	N/A

See Attachment 9

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
saltwater					
Total Dissolved Solids, mg/l	616	616	1	Comp	4/4/19, 7:00am
Electrical Conductivity, µmohs/cm, †	1125	1125	1	Comp	4/4/19, 7:00am
Oil & Grease, mg/l	5	5	1	Grab	4/4/19, 9:30am
Alkalinity ($CaCO_3$)*, mg/l	218	218	1	Comp	4/4/19, 7:00am

*TPDES permits only

†TLAP permits only

Table 1.0(3) - Pollutant Analysis for Water Treatment Facilities

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
Total Suspended Solids, mg/l			N/A		
Total Dissolved Solids, mg/l			N/A		
pH, standard units			N/A		
Fluoride, mg/l			N/A		
Aluminum, mg/l			N/A		
Alkalinity ($CaCO_3$), mg/l			N/A		

Section 8. Facility Operator (Instructions Page 60)

Facility Operator Name: Sterling Lee

Facility Operator's License Classification and Level: Class A Wastewater

Facility Operator's License Number: WW0041591

Section 9. Sewage Sludge Management and Disposal (Instructions Page 60)

A. Sludge disposal method

Identify the current or anticipated sludge disposal method or methods from the

following list. Check all that apply.

☒ Permitted landfill

☐ Permitted or Registered land application site for beneficial use

☐ Land application for beneficial use authorized in the wastewater permit

☐ Permitted sludge processing facility

☐ Marketing and distribution as authorized in the wastewater permit

☐ Composting as authorized in the wastewater permit

☐ Permitted surface disposal site (sludge monofill)

☐ Surface disposal site (sludge monofill) authorized in the wastewater permit

☐ Transported to another permitted wastewater treatment plant or permitted sludge processing facility. If you selected this method, a written statement or contractual agreement from the wastewater treatment plant or permitted sludge processing facility accepting the sludge must be included with this application.

☒ Other: Hauled to permitted compost facility for compost and sale.

B. Sludge disposal site

Disposal site name: Republic, Tessman Rd. Landfill / Gardenville-Martinez II WWTP Compost Facility

TCEQ permit or registration number: 1410 / WQ0010749-004

County where disposal site is located: Bexar

C. Sludge transportation method

Method of transportation (truck, train, pipe, other): Truck, Trailer/Pipe

Name of the hauler: San Antonio River Authority

Hauler registration number: 21858

Sludge is transported as a:

Liquid ☐ semi-liquid ☐ semi-solid ☐ solid ☒

Section 10. Permit Authorization for Sewage Sludge Disposal (Instructions Page 60)

A. Beneficial use authorization

Does the existing permit include authorization for land application of sewage sludge for beneficial use?

Yes ☐ No ☒

If yes, are you requesting to continue this authorization to land apply sewage sludge for beneficial use?

Yes ☐ No ☐

If yes, is the completed **Application for Permit for Beneficial Land Use of Sewage Sludge (TCEQ Form No. 10451)** attached to this permit application (see the instructions for details)?

Yes ☐ No ☐

B. Sludge processing authorization

Does the existing permit include authorization for any of the following sludge processing, storage or disposal options?

Sludge Composting	Yes ☐	No ☒
Marketing and Distribution of sludge	Yes ☐	No ☒
Sludge Surface Disposal or Sludge Monofill	Yes ☐	No ☒
Temporary storage in sludge lagoons	Yes ☐	No ☒

If yes to any of the above sludge options and the applicant is requesting to continue this authorization, is the completed **Domestic Wastewater Permit Application: Sewage Sludge Technical Report (TCEQ Form No. 10056)** attached to this permit application?

Yes ☐ No ☐

Section 11. Sewage Sludge Lagoons (Instructions Page 61)

Does this facility include sewage sludge lagoons?

Yes ☐ No ☒

If yes, complete the remainder of this section. If no, proceed to Section 12.

A. Location information

The following maps are required to be submitted as part of the application. For each map, provide the Attachment Number.

- Original General Highway (County) Map:

  Attachment:
- USDA Natural Resources Conservation Service Soil Map:

  Attachment:
- Federal Emergency Management Map:

  Attachment:
- Site map:

  Attachment:

Discuss in a description if any of the following exist within the lagoon area. Check all that apply.

- ☐ Overlap a designated 100-year frequency flood plain
- ☐ Soils with flooding classification
- ☐ Overlap an unstable area
- ☐ Wetlands
- ☐ Located less than 60 meters from a fault
- ☐ None of the above

Attachment:

If a portion of the lagoon(s) is located within the 100-year frequency flood plain, provide the protective measures to be utilized including type and size of protective structures:

B. Temporary storage information

Provide the results for the pollutant screening of sludge lagoons. These results are in addition to pollutant results in Section 7 of Technical Report 1.0.

Nitrate Nitrogen, mg/kg:

Total Kjeldahl Nitrogen, mg/kg:

Total Nitrogen (=nitrate nitrogen + TKN), mg/kg:

Phosphorus, mg/kg:

Potassium, mg/kg:

pH, standard units:

Ammonia Nitrogen mg/kg:

Arsenic:

Cadmium:

Chromium:

Copper:

Lead:

Mercury:

Molybdenum:

Nickel:

Selenium:

Zinc:

Total PCBs:

Provide the following information:

Volume and frequency of sludge to the lagoon(s):

Total dry tons stored in the lagoons(s) per 365-day period:

Total dry tons stored in the lagoons(s) over the life of the unit:

C. Liner information

Does the active/proposed sludge lagoon(s) have a liner with a maximum hydraulic conductivity of $1x10^{-7}$ cm/sec?

Yes ☐ No ☐

If yes, describe the liner below. Please note that a liner is required.

D. Site development plan

Provide a detailed description of the methods used to deposit sludge in the

lagoon(s):

Attach the following documents to the application.

- Plan view and cross-section of the sludge lagoon(s)

  Attachment:

- Copy of the closure plan

  Attachment:

- Copy of deed recordation for the site

  Attachment:

- Size of the sludge lagoon(s) in surface acres and capacity in cubic feet and gallons

  Attachment:

- Description of the method of controlling infiltration of groundwater and surface water from entering the site

  Attachment:

- Procedures to prevent the occurrence of nuisance conditions

  Attachment:

E. Groundwater monitoring

Is groundwater monitoring currently conducted at this site, or are any wells available for groundwater monitoring, or are groundwater monitoring data otherwise available for the sludge lagoon(s)?

Yes ☐ No ☐

If groundwater monitoring data are available, provide a copy. Provide a profile of soil types encountered down to the groundwater table and the depth to the shallowest groundwater as a separate attachment.

Attachment:

Section 12. Authorizations/Compliance/Enforcement

(Instructions Page 63)

A. Additional authorizations

Does the permittee have additional authorizations for this facility, such as reuse authorization, sludge permit, etc?

Yes ☒ No ☐

If yes, provide the TCEQ authorization number and description of the authorization:

Reuse Water Authorization No. R10749-001

B. Permittee enforcement status

Is the permittee currently under enforcement for this facility?

Yes ☐ No ☒

Is the permittee required to meet an implementation schedule for compliance or enforcement?

Yes ☐ No ☒

If yes to either question, provide a brief summary of the enforcement, the implementation schedule, and the current status:

Section 13. RCRA/CERCLA Wastes (Instructions Page 63)

A. RCRA hazardous wastes

Has the facility received in the past three years, does it currently receive, or will it receive RCRA hazardous waste?

Yes ☐ No ☒

B. Remediation activity wastewater

Has the facility received in the past three years, does it currently receive, or will it receive CERCLA wastewater, RCRA remediation/corrective action wastewater or other remediation activity wastewater?

Yes ☐ No ☒

C. Details about wastes received

If yes to either Subsection A or B above, provide detailed information concerning these wastes with the application.

Attachment:

Section 14. Laboratory Accreditation (Instructions Page 64)

All laboratory tests performed must meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification*, which includes the following general exemptions from National Environmental Laboratory Accreditation Program (NELAP) certification requirements:

- The laboratory is an in-house laboratory and is:
  - periodically inspected by the TCEQ; or
  - located in another state and is accredited or inspected by that state; or
  - performing work for another company with a unit located in the same site; or
  - performing pro bono work for a governmental agency or charitable organization.
- The laboratory is accredited under federal law.
- The data are needed for emergency-response activities, and a laboratory accredited under the Texas Laboratory Accreditation Program is not available.
- The laboratory supplies data for which the TCEQ does not offer accreditation.

The applicant should review *30 TAC Chapter 25* for specific requirements.

The following certification statement shall be signed and submitted with every application. See the *Signature Page* section in the Instructions, for a list of designated representatives who may sign the certification.

CERTIFICATION:

I certify that all laboratory tests submitted with this application meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification.*

Printed Name: Suzanne B. Scott

Title: General Manager

Signature: Suzanne B. Scott

Date: 7/16/19

DOMESTIC TECHNICAL REPORT WORKSHEET 2.0

RECEIVING WATERS

The following is required for all TPDES permit applications

Section 1. Domestic Drinking Water Supply (Instructions Page 73)

Is there a surface water intake for domestic drinking water supply located within 5 miles downstream from the point or proposed point of discharge?

Yes ☐ No ☒

If yes, provide the following:
Owner of the drinking water supply:

Distance and direction to the intake:

Attach a USGS map that identifies the location of the intake.

Attachment:

Section 2. Discharge into Tidally Affected Waters (Instructions Page 73)

Does the facility discharge into tidally affected waters?

Yes ☐ No ☒

If yes, complete the remainder of this section. If no, proceed to Section 3.

A. Receiving water outfall

Width of the receiving water at the outfall, in feet:

B. Oyster waters

Are there oyster waters in the vicinity of the discharge?

Yes ☐ No ☐

If yes, provide the distance and direction from outfall(s).

C. Sea grasses

Are there any sea grasses within the vicinity of the point of discharge?

Yes ☐ No ☐

If yes, provide the distance and direction from the outfall(s).

Section 3. Classified Segments (Instructions Page 73)

Is the discharge directly into (or within 300 feet of) a classified segment?

Yes ☐ No ☒

If yes, this Worksheet is complete.

If no, complete Sections 4 and 5 of this Worksheet.

Section 4. Description of Immediate Receiving Waters (Instructions Page 75)

Name of the immediate receiving waters: Salitrillo Creek

A. Receiving water type

Identify the appropriate description of the receiving waters.

☒ Stream

☐ Freshwater Swamp or Marsh

☐ Lake or Pond

Surface area, in acres:

Average depth of the entire water body, in feet:

Average depth of water body within a 500-foot radius of discharge point, in feet:

☐ Man-made Channel or Ditch

☐ Open Bay

☐ Tidal Stream, Bayou, or Marsh

☐ Other, specify:

B. Flow characteristics

If a stream, man-made channel or ditch was checked above, provide the following. For existing discharges, check one of the following that best characterizes the area *upstream* of the discharge. For new discharges, characterize the area *downstream* of the discharge (check one).

☒ Intermittent - dry for at least one week during most years

☐ Intermittent with Perennial Pools - enduring pools with sufficient habitat to maintain significant aquatic life uses

☐ Perennial - normally flowing

Check the method used to characterize the area upstream (or downstream for new dischargers).

☐ USGS flow records

☐ Historical observation by adjacent landowners

☒ Personal observation

☐ Other, specify:

C. Downstream perennial confluences

List the names of all perennial streams that join the receiving water within three miles downstream of the discharge point.

None

D. Downstream characteristics

Do the receiving water characteristics change within three miles downstream of the discharge (e.g., natural or man-made dams, ponds, reservoirs, etc.)?

Yes ☒ No ☐

If yes, discuss how.

Flows into Martinez Creek Soil Conservation Dam No. 6A Reservoir.

E. Normal dry weather characteristics

Provide general observations of the water body during normal dry weather conditions.

Clear water with visible aquatic life.

Date and time of observation: 7/3/2019, 10:00 am

Was the water body influenced by stormwater runoff during observations?

Yes ☐ No ☒

Section 5. General Characteristics of the Waterbody (Instructions Page 74)

A. Upstream influences

Is the immediate receiving water upstream of the discharge or proposed discharge site influenced by any of the following? Check all that apply.

- ☐ Oil field activities
- ☐ Upstream discharges
- ☐ Septic tanks
- ☐ Urban runoff
- ☒ Agricultural runoff
- ☐ Other(s), specify

B. Waterbody uses

Observed or evidences of the following uses. Check all that apply.

- ☒ Livestock watering
- ☐ Irrigation withdrawal
- ☒ Fishing
- ☐ Contact recreation
- ☒ Non-contact recreation
- ☐ Navigation

☐ Domestic water supply ☐ Industrial water supply

☐ Park activities ☐ Other(s), specify

C. Waterbody aesthetics

Check one of the following that best describes the aesthetics of the receiving water and the surrounding area.

☐ Wilderness: outstanding natural beauty; usually wooded or unpastured area; water clarity exceptional

☒ Natural Area: trees and/or native vegetation; some development evident (from fields, pastures, dwellings); water clarity discolored

☐ Common Setting: not offensive; developed but uncluttered; water may be colored or turbid

☐ Offensive: stream does not enhance aesthetics; cluttered; highly developed; dumping areas; water discolored

DOMESTIC WORKSHEET 4.0

POLLUTANT ANALYSES REQUIREMENTS*

The following is required for facilities with a permitted or proposed flow of 1.0 MGD or greater, facilities with an approved pretreatment program, or facilities classified as a major facility. See instructions for further details.

This worksheet is not required for minor amendments without renewal

Section 1. Toxic Pollutants (Instructions Page 87)

For pollutants identified in Table 4.0(1), indicate the type of sample.

Grab ☑ Composite ☑

Date and time sample(s) collected: 04/04/2019 @ 0700 and 0930

Table 4.0(1) - Toxics Analysis See Attachment 10

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acrylonitrile	<50		1	50
Aldrin	<0.01		1	0.01
Aluminum	29.0		1	2.5
Anthracene	<10		1	10
Antimony	<5		1	5
Arsenic	<0.5		1	0.5
Barium	66		1	3
Benzene	<10		1	10
Benzidine	<50		1	50
Benzo(a)anthracene	<5		1	5

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Benzo(a)pyrene	<5		1	5
Bis(2-chloroethyl)ether	<10		1	10
Bis(2-ethylhexyl)phthalate	<10		1	10
Bromodichloromethane	<10		1	10
Bromoform	<10		1	10
Cadmium	1		1	1
Carbon Tetrachloride	<2		1	2
Carbaryl	<4.2		1	5
Chlordane*	<0.2		1	0.2
Chlorobenzene	<10		1	10
Chlorodibromomethane	<10		1	10
Chloroform	<10		1	10
Chlorpyrifos	<0.04		1	0.05
Chromium (Total)	<3		1	3
Chromium (Tri) (*1)	<3		1	N/A
Chromium (Hex)	<3		1	3
Copper	4		1	2
Chrysene	<5		1	5
p-Chloro-m-Cresol	<10		1	10
4,6-Dinitro-o-Cresol	<50		1	50
p-Cresol	<10		1	10

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Cyanide (*2)	<10		1	10
4,4'- DDD	<0.1		1	0.1
4,4'- DDE	<0.1		1	0.1
4,4'- DDT	<0.02		1	0.02
2,4-D	<0.7		1	0.7
Demeton (O and S)	<0.05		1	0.20
Diazinon	<0.05		1	0.5/0.1
1,2-Dibromoethane	<10		1	10
m-Dichlorobenzene	<10		1	10
o-Dichlorobenzene	<10		1	10
p-Dichlorobenzene	<10		1	10
3,3'-Dichlorobenzidine	<5		1	5
1,2-Dichloroethane	<10		1	10
1,1-Dichloroethylene	<10		1	10
Dichloromethane	<20		1	20
1,2-Dichloropropane	<10		1	10
1,3-Dichloropropene	<10		1	10
Dicofol	<0.04		1	1
Dieldrin	<0.02		1	0.02
2,4-Dimethylphenol	<10		1	10
Di-n-Butyl Phthalate	<10		1	10

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Diuron	<0.09		1	0.09
Endosulfan I (alpha)	<0.01		1	0.01
Endosulfan II (beta)	<0.02		1	0.02
Endosulfan Sulfate	<0.1		1	0.1
Endrin	<0.02		1	0.02
Ethylbenzene	<10		1	10
Fluoride	580		1	500
Guthion	<0.05		1	0.1
Heptachlor	<0.01		1	0.01
Heptachlor Epoxide	<0.01		1	0.01
Hexachlorobenzene	<5		1	5
Hexachlorobutadiene	<10		1	10
Hexachlorocyclohexane (alpha)	<0.05		1	0.05
Hexachlorocyclohexane (beta)	<0.05		1	0.05
gamma-Hexachlorocyclohexane (Lindane)	<0.05		1	0.05
Hexachlorocyclopentadiene	<10		1	10
Hexachloroethane	<20		1	20
Hexachlorophene	<10		1	10
Lead	<0.5		1	0.5
Malathion	<0.05		1	0.1

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Mercury	<0.005		1	0.005
Methoxychlor	<2		1	2
Methyl Ethyl Ketone	<50		1	50
Mirex	<0.01		1	0.02
Nickel	4		1	2
Nitrate-Nitrogen	5,900		1	100
Nitrobenzene	<10		1	10
N-Nitrosodiethylamine	<20		1	20
N-Nitroso-di-n-Butylamine	<20		1	20
Nonylphenol	<333		1	333
Parathion (ethyl)	<0.05		1	0.1
Pentachlorobenzene	<20		1	20
Pentachlorophenol	<5		1	5
Phenanthrene	<10		1	10
Polychlorinated Biphenyls (PCB's) (*3)	<0.2		1	0.2
Pyridine	<20		1	20
Selenium	<5		1	5
Silver	<0.5		1	0.5
1,2,4,5-Tetrachlorobenzene	<20		1	20
1,1,2,2-Tetrachloroethane	<10		1	10

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Tetrachloroethylene	<10		1	10
Thallium	<0.5		1	0.5
Toluene	<10		1	10
Toxaphene	<0.3		1	0.3
2,4,5-TP (Silvex)	<0.3		1	0.3
Tributyltin (see instructions for explanation)	N/A		1	0.01
1,1,1-Trichloroethane	<10		1	10
1,1,2-Trichloroethane	<10		1	10
Trichloroethylene	<10		1	10
2,4,5-Trichlorophenol	<50		1	50
TTHM (Total Trihalomethanes)	<10		1	10
Vinyl Chloride	<10		1	10
Zinc	39		1	5

(*1) Determined by subtracting hexavalent Cr from total Cr.

(*2) Cyanide, amenable to chlorination or weak-acid dissociable.

(*3) The sum of seven PCB congeners 1242, 1254, 1221, 1232, 1248, 1260, and 1016.

Section 2. Priority Pollutants

For pollutants identified in Tables 4.0(2)A-E, indicate type of sample.

Grab ☑ Composite ☑

Date and time sample(s) collected: 04/04/2019 @ 0700 and 0930

Table 4.0(2)A – Metals, Cyanide, Phenols

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Antimony	<5		1	5
Arsenic	<0.5		1	0.5
Beryllium	<0.5		1	0.5
Cadmium	1		1	1
Chromium (Total)	<3		1	3
Chromium (Hex)	<3		1	3
Chromium (Tri) (*1)	<3		1	N/A
Copper	4		1	2
Lead	<0.5		1	0.5
Mercury	<0.005		1	0.005
Nickel	4		1	2
Selenium	<5		1	5
Silver	<0.5		1	0.5
Thallium	<0.5		1	0.5
Zinc	39		1	5
Cyanide (*2)	<10		1	10
Phenols, Total	<10		1	10

(*1) Determined by subtracting hexavalent Cr from total Cr.

(*2) Cyanide, amenable to chlorination or weak-acid dissociable

Table 4.0(2)B – Volatile Compounds

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acrolein	<50		1	50
Acrylonitrile	<50		1	50
Benzene	<10		1	10
Bromoform	<10		1	10
Carbon Tetrachloride	<2		1	2
Chlorobenzene	<10		1	10
Chlorodibromomethane	<10		1	10
Chloroethane	<50		1	50
2-Chloroethylvinyl Ether	<10		1	10
Chloroform	<10		1	10
Dichlorobromomethane [Bromodichloromethane]	<10		1	10
1,1-Dichloroethane	<10		1	10
1,2-Dichloroethane	<10		1	10
1,1-Dichloroethylene	<10		1	10
1,2-Dichloropropane	<10		1	10
1,3-Dichloropropylene [1,3-Dichloropropene]	<10		1	10
1,2-Trans-Dichloroethylene	<10		1	10
Ethylbenzene	<10		1	10
Methyl Bromide	<50		1	50
Methyl Chloride	<50		1	50
Methylene Chloride	<20		1	20
1,1,2,2-Tetrachloroethane	<10		1	10
Tetrachloroethylene	<10		1	10

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Toluene	<10		1	10
1,1,1-Trichloroethane	<10		1	10
1,1,2-Trichloroethane	<10		1	10
Trichloroethylene	<10		1	10
Vinyl Chloride	<10		1	10

Table 4.0(2)C – Acid Compounds

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
2-Chlorophenol	<10		1	10
2,4-Dichlorophenol	<10		1	10
2,4-Dimethylphenol	<10		1	10
4,6-Dinitro-o-Cresol	<50		1	50
2,4-Dinitrophenol	<50		1	50
2-Nitrophenol	<20		1	20
4-Nitrophenol	<50		1	50
P-Chloro-m-Cresol	<10		1	10
Pentalchlorophenol	<5		1	5
Phenol	<10		1	10
2,4,6-Trichlorophenol	<10		1	10

Table 4.0(2)D – Base/Neutral Compounds

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acenaphthene	<10		1	10
Acenaphthylene	<10		1	10
Anthracene	<10		1	10
Benzidine	<50		1	50
Benzo(a)Anthracene	<5		1	5
Benzo(a)Pyrene	<5		1	5
3,4-Benzofluoranthene	<10		1	10
Benzo(ghi)Perylene	<20		1	20
Benzo(k)Fluoranthene	<5		1	5
Bis(2-Chloroethoxy)Methane	<10		1	10
Bis(2-Chloroethyl)Ether	<10		1	10
Bis(2-Chloroisopropyl)Ether	<10		1	10
Bis(2-Ethylhexyl)Phthalate	<10		1	10
4-Bromophenyl Phenyl Ether	<10		1	10
Butyl benzyl Phthalate	<10		1	10
2-Chloronaphthalene	<10		1	10
4-Chlorophenyl phenyl ether	<10		1	10
Chrysene	<5		1	5
Dibenzo(a,h)Anthracene	<5		1	5
1,2-(o)Dichlorobenzene	<10		1	10
1,3-(m)Dichlorobenzene	<10		1	10
1,4-(p)Dichlorobenzene	<10		1	10
3,3-Dichlorobenzidine	<5		1	5
Diethyl Phthalate	<10		1	10
Dimethyl Phthalate	<10		1	10

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Di-n-Butyl Phthalate	<10		1	10
2,4-Dinitrotoluene	<10		1	10
2,6-Dinitrotoluene	<10		1	10
Di-n-Octyl Phthalate	<10		1	10
1,2-Diphenylhydrazine (as Azo-benzene)	<20		1	20
Fluoranthene	<20		1	10
Fluorene	<10		1	10
Hexachlorobenzene	<5		1	5
Hexachlorobutadiene	<10		1	10
Hexachlorocyclo-pentadiene	<10		1	10
Hexachloroethane	<20		1	20
Indeno(1,2,3-cd)pyrene	<5		1	5
Isophorone	<10		1	10
Naphthalene	<10		1	10
Nitrobenzene	<10		1	10
N-Nitrosodimethylamine	<50		1	50
N-Nitrosodi-n-Propylamine	<20		1	20
N-Nitrosodiphenylamine	<20		1	20
Phenanthrene	<10		1	10
Pyrene	<10		1	10
1,2,4-Trichlorobenzene	<10		1	10

Table 4.0(2)E - Pesticides

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Aldrin	<0.01		1	0.01
alpha-BHC (Hexachlorocyclohexane)	<0.05		1	0.05
beta-BHC (Hexachlorocyclohexane)	<0.05		1	0.05
gamma-BHC (Hexachlorocyclohexane)	<0.05		1	0.05
delta-BHC (Hexachlorocyclohexane)	<0.05		1	0.05
Chlordane	<0.2		1	0.2
4,4-DDT	<0.02		1	0.02
4,4-DDE	<0.1		1	0.1
4,4,-DDD	<0.1		1	0.1
Dieldrin	<0.02		1	0.02
Endosulfan I (alpha)	<0.01		1	0.01
Endosulfan II (beta)	<0.02		1	0.02
Endosulfan Sulfate	<0.1		1	0.1
Endrin	<0.02		1	0.02
Endrin Aldehyde	<0.1		1	0.1
Heptachlor	<0.01		1	0.01
Heptachlor Epoxide	<0.01		1	0.01
PCB-1242	<0.2		1	0.2
PCB-1254	<0.2		1	0.2
PCB-1221	<0.2		1	0.2
PCB-1232	<0.2		1	0.2

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
PCB-1248	<0.2		1	0.2
PCB-1260	<0.2		1	0.2
PCB-1016	<0.2		1	0.2
Toxaphene	<0.3		1	0.3

* For PCBS, if all are non-detects, enter the highest non-detect preceded by a "<".

Section 3. Dioxin/Furan Compounds

A. Indicate which of the following compounds from may be present in the influent from a contributing industrial user or significant industrial user. Check all that apply.

☐ 2,4,5-trichlorophenoxy acetic acid
Common Name 2,4,5-T, CASRN 93-76-5

☐ 2-(2,4,5-trichlorophenoxy) propanoic acid
Common Name Silvex or 2,4,5-TP, CASRN 93-72-1

☐ 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate
Common Name Erbon, CASRN 136-25-4

☐ 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate
Common Name Ronnel, CASRN 299-84-3

☐ 2,4,5-trichlorophenol
Common Name TCP, CASRN 95-95-4

☐ hexachlorophene
Common Name HCP, CASRN 70-30-4

For each compound identified, provide a brief description of the conditions of its/their presence at the facility.

B. Do you know or have any reason to believe that 2,3,7,8 Tetrachlorodibenzo-P-Dioxin (TCDD) or any congeners of TCDD may be present in your effluent?

Yes ☐ No ☐

If **yes**, provide a brief description of the conditions for its presence.

If any of the compounds in Subsection A **or** B are present, complete Table 4.0(2)F.

For pollutants identified in Table 4.0(2)F, indicate the type of sample.

Grab ☐ Composite ☐

Date and time sample(s) collected:

TABLE 4.0(2)F - DIOXIN/FURAN COMPOUNDS

Compound	Toxic Equivalency Factors	Wastewater Concentration (ppq)	Wastewater Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Equivalents (ppt)	MAL (ppq)
2,3,7,8 TCDD	1					10
1,2,3,7,8	0.5					50
2,3,7,8 HxCDDs	0.1					50
1,2,3,4,6,7,8 HpCDD	0.01					50
2,3,7,8 TCDF	0.1					10
1,2,3,7,8 PeCDF	0.05					50
2,3,4,7,8 PeCDF	0.5					50
2,3,7,8 HxCDFs	0.1					50
2,3,4,7,8	0.01					50
OCDD	0.0003					100
OCDF	0.0003					100
PCB 77	0.0001					0.5
PCB 81	0.0003					0.5

Compound	Toxic Equivalency Factors	Wastewater Concentration (ppq)	Wastewater Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Equivalents (ppt)	MAL (ppq)
PCB 126	0.1					0.5
PCB 169	0.03					0.5
Total						

DOMESTIC WORKSHEET 5.0

TOXICITY TESTING REQUIREMENTS

The following is required for facilities with a currently-operating design flow greater than or equal to 1.0 MGD, with an EPA-approved pretreatment program (or those that are required to have one under 40 CFR Part 403), or are required by the TCEQ to perform Whole Effluent Toxicity testing. This worksheet is not required for minor amendments without renewal.

Section 1. Required Tests (Instructions Page 97)

Indicate the number of 7-day chronic or 48-hour acute Whole Effluent Toxicity (WET) tests performed in the four and one-half years prior to submission of the application.

7-day Chronic: 20 (11 Ceriodaphnia Dubia/ 9 Pimephales Promelas)

48-hour Acute: 0

Section 2. Toxicity Reduction Evaluations (TREs)

Has this facility completed a TRE in the past four and a half years? Or is the facility currently performing a TRE?

Yes ☐ No ☒

If yes, describe the progress to date, if applicable, in identifying and confirming the toxicant.

Section 3. Summary of WET Tests

If the required biomonitoring test information has not been previously submitted via both the Discharge Monitoring Reports (DMRs) and the Table 1 (as found in the permit), provide a summary of the testing results for all valid and invalid tests performed over the past four and one-half years. Make additional copies of this table as needed.

Table 5.0(1) - Summary of WET Tests

Test Date	Test Species	NOEC Survival	NOEC Sub-lethal
	N/A		

DOMESTIC WORKSHEET 6.0

INDUSTRIAL WASTE CONTRIBUTION

The following is required for all publicly owned treatment works (POTWs)

Section 1. All POTWs (Instructions Page 99)

A. Industrial users

Provide the number of each of the following types of industrial users (IUs) that discharge to your POTW and the daily flows from each user. See the Instructions for definitions of Categorical IUs, Significant IUs - non-categorical, and Other IUs.

If there are no users, enter 0 (zero).

Categorical IUs:

Number of IUs: 1

Average Daily Flows, in MGD: 0.000253

Significant IUs - non-categorical:

Number of IUs:

Average Daily Flows, in MGD: 0

Other IUs:

Number of IUs: 4

Average Daily Flows, in MGD: 0.004152 See Attachment 11

B. Treatment plant interference

In the past three years, has your POTW experienced treatment plant interference (see instructions)?

Yes ☐ No ☒

If yes, identify the dates, duration, description of interference, and probable cause(s) and possible source(s) of each interference event. Include the names of the IUs that may have caused the interference.

C. Treatment plant pass through

In the past three years, has your POTW experienced pass through (see instructions)?

Yes ☐ No ☒

If yes, identify the dates, duration, a description of the pollutants passing through the treatment plant, and probable cause(s) and possible source(s) of each pass through event. Include the names of the IUs that may have caused pass through.

D. Pretreatment program

Does your POTW have an approved pretreatment program?

Yes ☐ No ☒

If yes, complete Section 2 only of this Worksheet.

Is your POTW required to develop an approved pretreatment program?

Yes ☐ No ☒

If yes, complete Section 2.c. and 2.d. only, and skip Section 3.

If no to either question above, skip Section 2 and complete Section 3 for each significant industrial user and categorical industrial user.

Section 2. POTWs with Approved Programs or Those Required to Develop a Program (Instructions Page 100)

A. Substantial modifications

Have there been any **substantial modifications** to the approved pretreatment program that have not been submitted to the TCEQ for approval according to *40 CFR §403.18*?

Yes ☐ No ☐

If yes, identify the modifications that have not been submitted to TCEQ, including the purpose of the modification.

B. Non-substantial modifications

Have there been any **non-substantial modifications** to the approved pretreatment program that have not been submitted to TCEQ for review and acceptance?

Yes ☐ No ☐

If yes, identify all non-substantial modifications that have not been submitted to TCEQ, including the purpose of the modification.

C. Effluent parameters above the MAL

In Table 6.0(1), list all parameters measured above the MAL in the POTW's effluent monitoring during the last three years. Submit an attachment if necessary.

Table 6.0(1) - Parameters Above the MAL

Pollutant	Concentration	MAL	Units	Date

D. Industrial user interruptions

Has any SIU, CIU, or other IU caused or contributed to any problems (excluding interferences or pass throughs) at your POTW in the past three years?

Yes ☐ No ☐

If yes, identify the industry, describe each episode, including dates, duration, description of the problems, and probable pollutants.

Section 3. Significant Industrial User (SIU) Information and Categorical Industrial User (CIU) (Instructions Page 100)

A. General information

Company Name: Alamo Plating

SIC Code: 3471

Telephone number: (210) 658-4024 Fax number:

Contact name: Jana Wallace

Address: 9230 Converse Business Lane

City, State, and Zip Code: Converse, TX 78109

B. Process information

Describe the industrial processes or other activities that affect or contribute to the SIU(s) or CIU(s) discharge (i.e., process and non-process wastewater).

Electrochemical deposition of metals upon ferrous and nonferrous metal substrates. See Attachment 12

C. Product and service information

Provide a description of the principal product(s) or services performed.

Raw Material - Nickel, Copper, Gold, Chrome, and Black Nickel. (1000 lbs/yr)

D. Flow rate information

See the Instructions for definitions of "process" and "non-process wastewater."

Process Wastewater:

Discharge, in gallons/day: 53

Discharge Type: ☐ Continuous ☒ Batch ☐ Intermittent

Non-Process Wastewater:

Discharge, in gallons/day: 200

Discharge Type: ☐ Continuous ☐ Batch ☒ Intermittent

E. Pretreatment standards

Is the SIU or CIU subject to technically based local limits as defined in the instructions?

Yes ☒ No ☐

Is the SIU or CIU subject to categorical pretreatment standards found in *40 CFR Parts 405-471*?

Yes ☒ No ☐

If subject to categorical pretreatment standards, indicate the applicable category and subcategory for each categorical process.

Category: 413
Subcategories: .10

Category:
Subcategories:

Category:
Subcategories:

Category:
Subcategories:

Category:
Subcategories:

F. Industrial user interruptions

Has the SIU or CIU caused or contributed to any problems (e.g., interferences, pass through, odors, corrosion, blockages) at your POTW in the past three years?

Yes ☐ No ☒

If yes, identify the SIU, describe each episode, including dates, duration, description of problems, and probable pollutants.

N/A

Salitrillo Wastewater Discharge Permit Amendment 08/2019
TPDES No. WQ0010749-001 (EPA I.D. TX0053074)

Attachment 1

Copy of Check

Reference: Domestic Administrative Report 1.0

Page 2

Attachment 1

Salatrillo WWTP
Copy of Check

The attached is a copy of the payment submittal from the San Antonio River Authority that included payment of $2,050.00 for a Permit Amendment for the Salitrillo WWTP (WQ0010749-001 / TX0053074).
After further consideration, it was determined that we are not far along enough on the design process to apply for an amendment at this time. Therefore the application for this facility is actually for a renewal instead of an amendment.

SAN ANTONIO
RIVER AUTHORITY

UT-MRT2-TCEQ-NPDES-DMR-CORR
UT-UMRT-TCEQ-NPDES-DMR-CORR
UT-MRT4-TCEQ-NPDES-DMR-CORR
UT-SALA-TCEQ-NPDES-DMR-CORR

June 11, 2019

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (7017 3380 0000 7514 2004)

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
P.O. Box 13088
Austin, Texas 78711-3088

Reference: Salitrillo Creek Wastewater Treatment Plant; RN101514560
TPDES Permit No. WQ0010749-001 and NPDES No.TX0053074;
Martinez II Wastewater Treatment Plant; RN101514156
TPDES Permit No. WQ0010749-004 and NPDES No.TX0095583;
Upper Martinez Wastewater Treatment Plant; RN101514347
TPDES Permit No. WQ0010749-003 and NPDES No.TX0024082;
Martinez IV Wastewater Treatment Plant; RN105285506
TPDES Permit No. WQ0010749-007 and NPDES No.TX0129861;
San Antonio River Authority CN600790620; Tax No. 1-74-6011311-5

Subject: Wastewater Discharge Permit Application Fee

Dear Madam/Sir:

Enclosed is check no. 931973 for the total amount of $8,130.00 for four (4) wastewater discharge permit applications for the above referenced plants. These four (4) permits are due to expire March 1, 2020. The fee amount for each application is as follows:

Salitrillo WWTP, Permit No. WQ0010749-001 (Major Amendment)	$2,050.00
Martinez II WWTP, Permit No. WQ0010749-004 (Renewal)	$2,015.00
Upper Martinez WWTP, Permit No. WQ0010749-003 (Renewal)	$2,015.00
Martinez IV WWTP, Permit No. WQ0010749-007 (Major Amendment)	$2,050.00

100 East Guenther St. ☆ San Antonio, Texas 78204 ☆ www.sara-tx.org
(210) 227-1373 ☆ (866) 345-7272 ☆ Fax (210) 227-4323

Reference: Salitrillo Creek Wastewater Treatment Plant; RN101514560
TPDES Permit No. WQ0010749-001 and NPDES No.TX0053074;
Martinez II Wastewater Treatment Plant; RN101514156
TPDES Permit No. WQ0010749-004 and NPDES No.TX0095583;
Upper Martinez Wastewater Treatment Plant; RN101514347
TPDES Permit No. WQ0010749-003 and NPDES No.TX0024082;
Martinez IV Wastewater Treatment Plant; RN105285506
TPDES Permit No. WQ0010749-007 and NPDES No.TX0129861;
San Antonio River Authority CN600790620; Tax No. 1-74-6011311-5

Subject: Wastewater Discharge Permit Application Fee

Please call Daniel Flores at (210) 302-4200, should you have any questions and/or require any additional information.

Sincerely,

DANIEL FLORES
Utilities Operations Superintendent

DF;ddv

Enclosure

WATER QUALITY PERMIT

PAYMENT SUBMITTAL FORM

Use this form to submit the Application Fee, if the mailing the payment.

- Complete items 1 through 5 below.
- Staple the check or money order in the space provided at the bottom of this document.
- **Do not mail this form with the application form.**
- Do not mail this form to the same address as the application.
- Do not submit a copy of the application with this form as it could cause duplicate permit entries.

Mail this form and the check or money order to:

BY REGULAR U.S. MAIL

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
P.O. Box 13088
Austin, Texas 78711-3088

BY OVERNIGHT/EXPRESS MAIL

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
12100 Park 35 Circle
Austin, Texas 78753

Fee Code: WQP **Waste Permit No:** See Attached List

1. Check or Money Order Number: 931973
2. Check or Money Order Amount: $8,130.00
3. Date of Check or Money Order: 06/07/2019
4. Name on Check or Money Order: San Antonio River Authority
5. APPLICATION INFORMATION

   Name of Project or Site: See Attached List

   Physical Address of Project or Site: See Attached List

   If the check is for more than one application, attach a list which includes the name of each Project or Site (RE) and Physical Address, exactly as provided on the application.

Staple Check or Money Order in This Space

SAN ANTONIO RIVER AUTHORITY

CHECK DATE	CHECK NO.
06/07/19	931973

PO NUMBER	INVOICE NUMBER	INVOICE DATE	SECONDARY REF	DESCRIPTION	NET AMOUNT
	PERMIT 10749-001	05/31/19		RENEWAL WQ 0010749-001	2,050.00
	PERMIT 10749-003	05/31/19		RENEWAL WQ 0010749-003	2,015.00
	PERMIT 10749-004	05/31/19		RENEWAL WQ 0010749-004	2,015.00
	PERMIT 10749-007	05/31/19		RENEWAL WQ 0010749-007	2,050.00
				TOTAL	8,130.00

DETACH STUB BEFORE DEPOSITING

SAN ANTONIO RIVER AUTHORITY
DISBURSING ACCOUNT
P.O. BOX 839980
SAN ANTONIO, TEXAS 78283 - 9980
210-227-1373

FROST BANK
DOWNTOWN

30-9/1140

CHECK NO. 931973

DATE 06/07/19

AMOUNT $*****8,130.00

VOID AFTER SIX MONTHS

PAY EXACTLY EIGHT Thousand ONE Hundred THIRTY Dollars and ZERO Cents

TO THE ORDER OF
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
PO BOX 13089
AUSTIN TX 78711-3089

Suzanne B Scott
Stephen J Graham

⑈931973⑈ ⑆114000093⑆ 019992313⑈

List of Projects Included on Check

San Antonio River Authority CN600790620; Tax No. 1-74-6011311-5
Check No. 931973, $8,130.00

Salitrillo Creek Wastewater Treatment Plant; RN101514560
TPDES Permit No. WQ0010749-001 and NPDES No.TX0053074;
9638 Schaefer Road, Converse Texas 78109
$2,050.00

Martinez II Wastewater Treatment Plant; RN101514156
TPDES Permit No. WQ0010749-004 and NPDES No.TX0095583;
1720 Farm-to-Market Road 1516 North, Converse Texas 78109
$2015.00

Upper Martinez Wastewater Treatment Plant; RN101514347
TPDES Permit No. WQ0010749-003 and NPDES No.TX0024082;
8203 Binz-Engleman Road San Antonio, Texas 78244
$2015.00

Martinez IV Wastewater Treatment Plant; RN105285506
TPDES Permit No. WQ0010749-007 and NPDES No.TX0129861;
2095 N. Graytown Road, Saint Hedwig Texas 78152
$2050.00

Salitrillo Wastewater Discharge Permit Amendment 08/2019
TPDES No. WQ0010749-001 (EPA I.D. TX0053074)

Attachment 2

Core Data Form

Reference: Domestic Administrative Report 1.0

Page 4, Section 3 C

TCEQ

TCEQ Core Data Form

TCEQ Use Only

For detailed instructions regarding completion of this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission *(If other is checked please describe in space provided.)*

☐ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☒ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN 600790620		RN 101514560

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy)

☐ New Customer ☒ Update to Customer Information ☐ Change in Regulated Entity Ownership

☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* *If new Customer, enter previous Customer below:*

San Antonio River Authority

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*
0800533765	12035383905	746011311	074611047

11. Type of Customer: ☒ Corporation ☐ Individual Partnership: ☐ General ☐ Limited

Government: ☐ City ☐ County ☐ Federal ☐ State ☒ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☐ 0-20 ☐ 21-100 ☐ 101-250 ☒ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☐ Yes ☒ No

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following:*

☐ Owner ☐ Operator ☒ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ Voluntary Cleanup Applicant ☐ Other:

15. Mailing Address:

100 E Guenther Street							
City	San Antonio	**State**	TX	**ZIP**	78204	**ZIP + 4**	

16. Country Mailing Information *(if outside USA)*	17. E-Mail Address *(if applicable)*
	danielf@sara-tx.org

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(210) 227-1373		(210) 661-9324

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected below this form should be accompanied by a permit application)*

☐ New Regulated Entity ☐ Update to Regulated Entity Name ☒ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency Data Standards (removal of organizational endings such as Inc, LP, or LLC.)

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

Salitrillo Creek Wastewater Treatment Plant

23. Street Address of the Regulated Entity: *(No PO Boxes)*	9638 Schaefer Road							
	City	Converse	State	TX	ZIP	78109	ZIP + 4	
24. County	Bexar							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:					
26. Nearest City			State		Nearest ZIP Code

27. Latitude (N) In Decimal:			28. Longitude (W) In Decimal:		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	30	31	98	17	55

29. Primary SIC Code (4 digits)	30. Secondary SIC Code (4 digits)	31. Primary NAICS Code (5 or 6 digits)	32. Secondary NAICS Code (5 or 6 digits)
4952		22132	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Wastewater Treatment

34. Mailing Address:	100 E Guenther Street							
	City	San Antonio	State	TX	ZIP	78204	ZIP + 4	

35. E-Mail Address:		
36. Telephone Number	37. Extension or Code	38. Fax Number *(if applicable)*
(210) 227-1723		(210) 661-9324

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☒ Sludge	☒ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
21858 (Transporter)	TXR05K745			
☐ Voluntary Cleanup	☒ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other: Reclaimed Water
	WQ0010749-001			R10749-001

SECTION IV: Preparer Information

40. Name:	Daniel Flores	41. Title:	Utilities Ops Superintendent

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(210) 302-4219		(210) 661-9324	danielf@sara-tx.org

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	San Antonio River Authority	Job Title:	General Manager	
Name *(In Print)* :	Suzanne B. Scott		Phone:	(210) 227-1373
Signature:	Suzanne B. Scott		Date:	7/16/19

Salitrillo Wastewater Discharge Permit Amendment 08/2019
TPDES No. WQ0010749-001 (EPA I.D. TX0053074)

Attachment 3

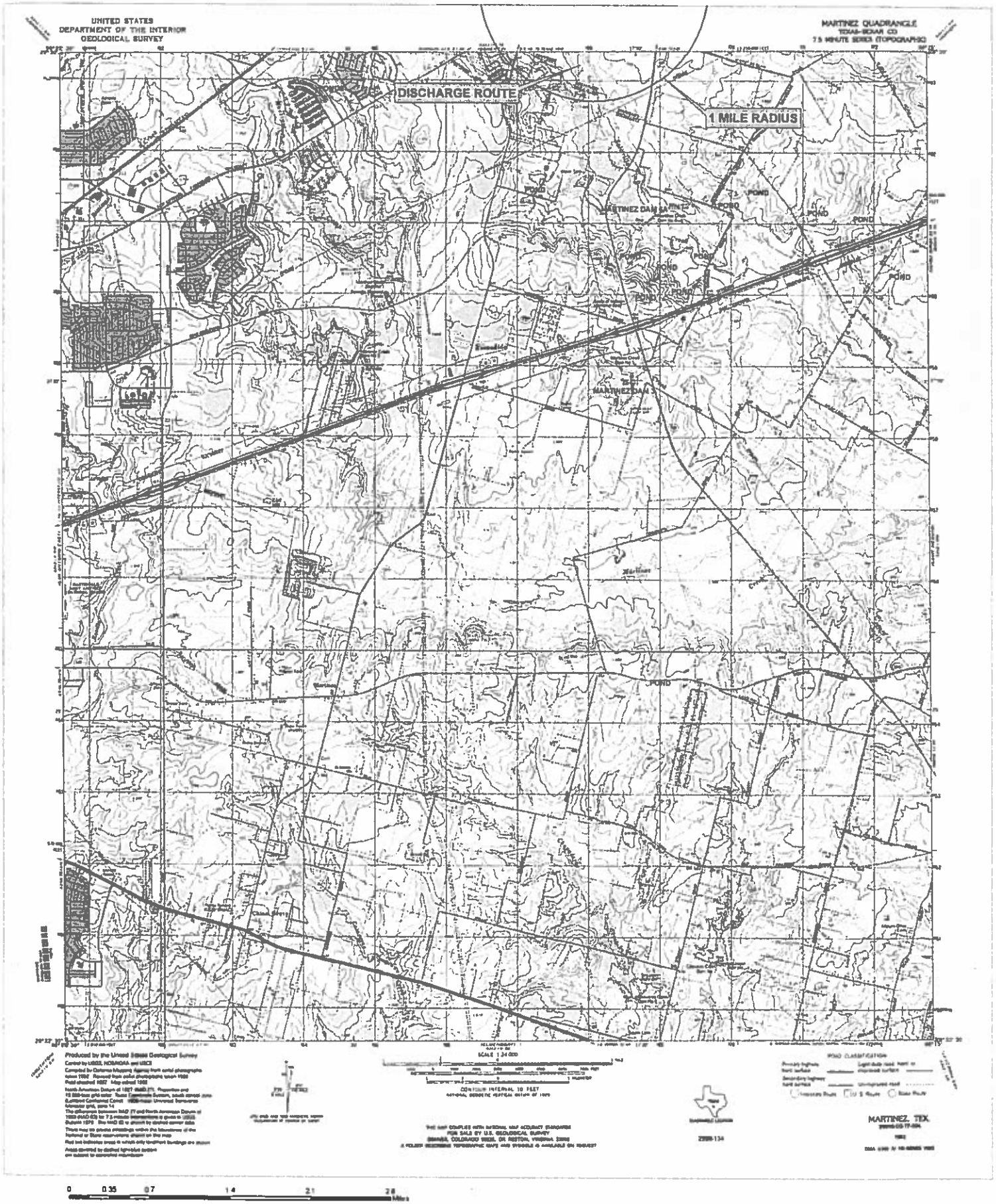
Original USGS Map

Reference: Domestic Administrative Report 1.0

Page 12, Section 13

Original USGS Topographic Map

Attachment 3A



Original USGS Topographic Map

N
W E
S

Attachment 3B

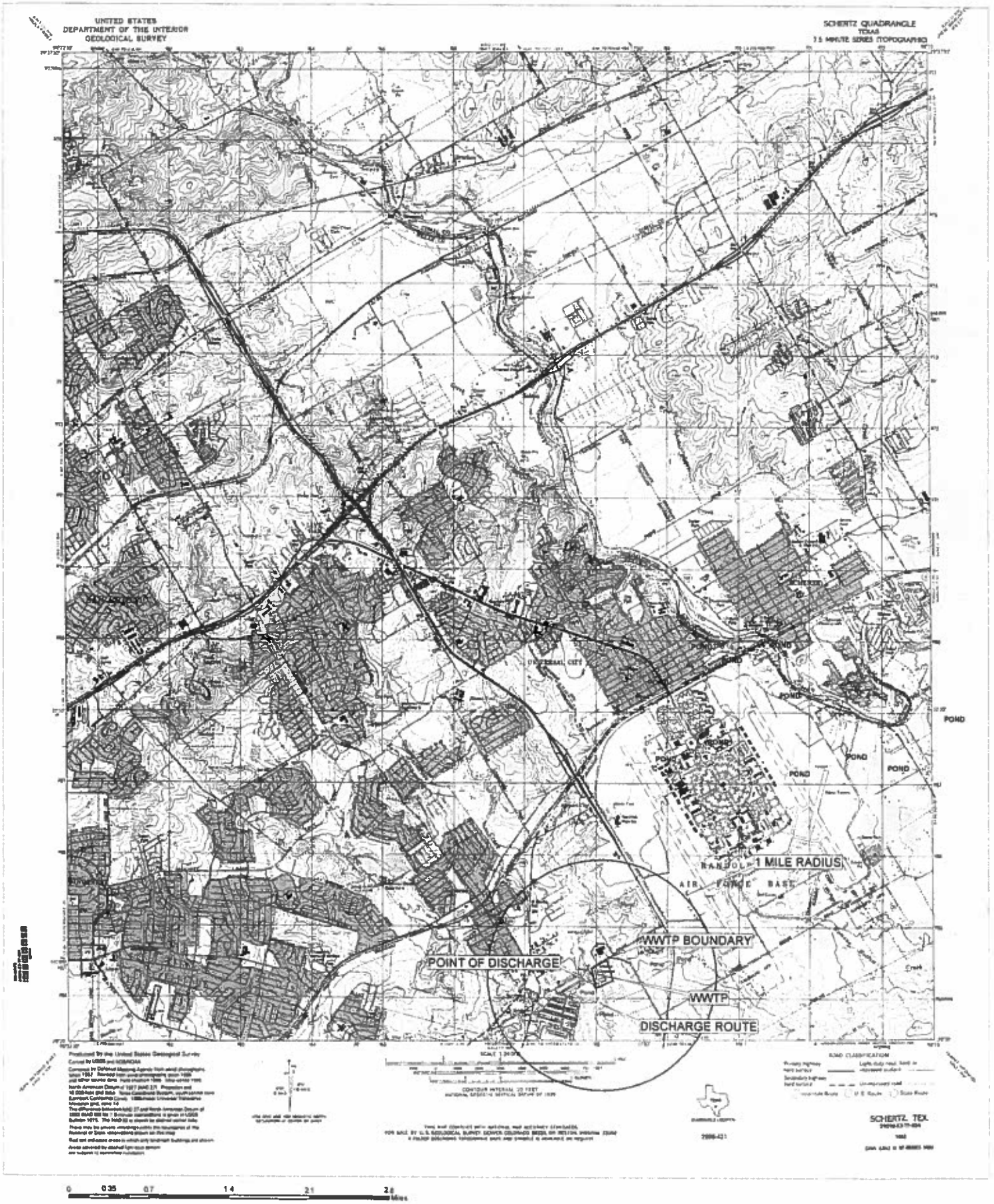
Salitrillo Wastewater Discharge Permit Amendment 08/2019
TPDES No. WQ0010749-001 (EPA I.D. TX0053074)

Attachment 4

USGS Map and General Location Map

Reference: Supplemental Permit Information Form

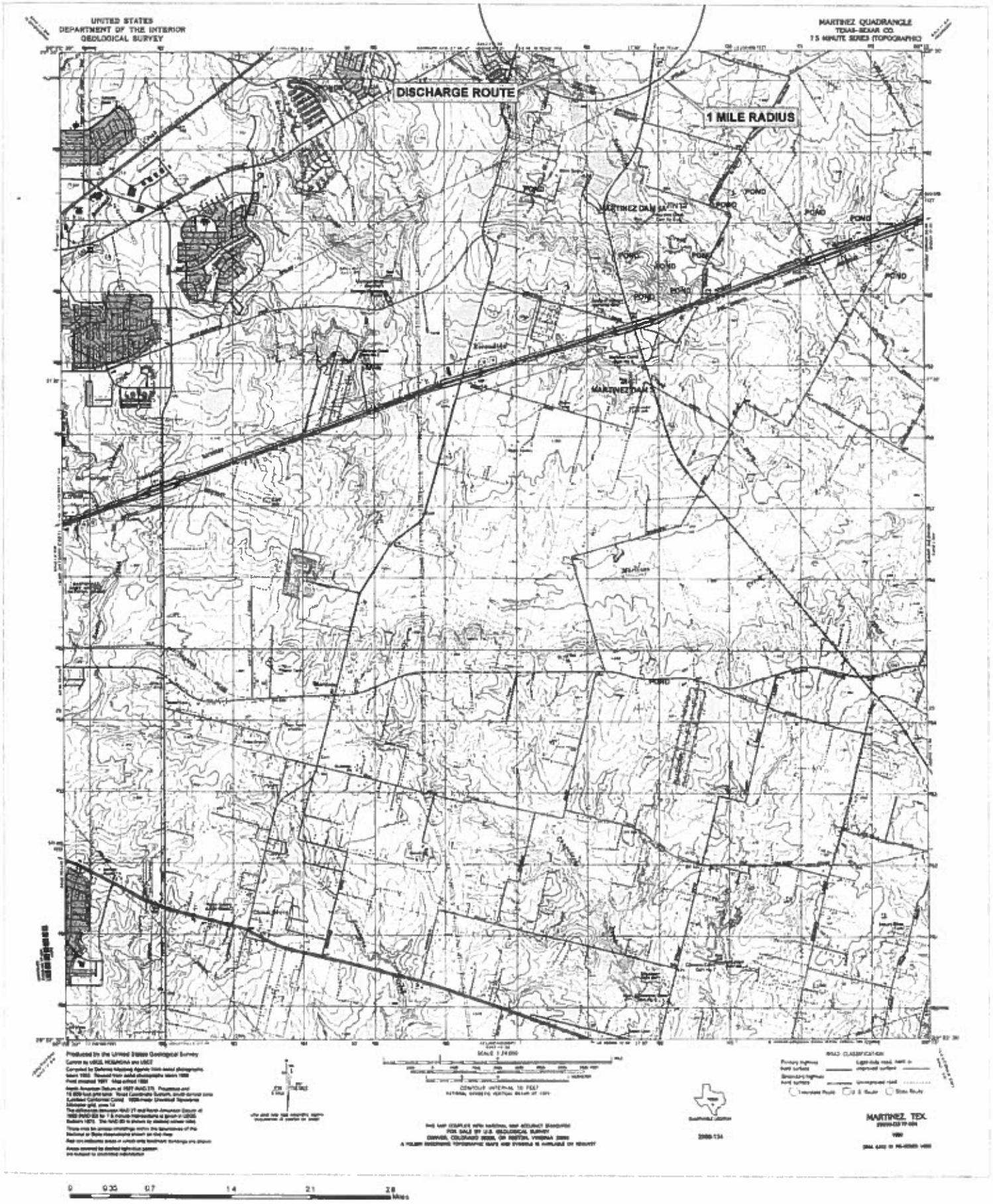
Page 17, Item 5



Original USGS Topographic Map

N
W E
S

Attachment 4A



Original USGS Topographic Map

N
W E
S

Attachment 4B

Salitrillo Wastewater Discharge Permit Amendment 08/2019
TPDES No. WQ0010749-001 (EPA I.D. TX0053074)

Attachment 5

Description of Treatment Process

Reference: Domestic Technical Report 1.0

Section 2 A

Attachment 5

Salitrillo WWTP
Description of Treatment Process

The Salatrillo WWTP is an activated sludge plant with a current permitted flow of 5.83 MGD. The mode of operation is extended aeration. It is proposed to expand the plant by 1.67 MGD to 7.5 MGD under this permit amendment. The sewage (Raw) enters the plant at two separate lift stations and flows through two separate trains that include primary treatment, secondary treatment and disinfection. The effluent from each train mix and leave the plant through one point of discharge.

First Train:
Currently, the Raw enters the plant through a lift station consisting of three centrifugal pumps (2 rated at 1,600 GPM each and 1 at 1,080 GPM). The pump capacities will be upgraded in the next plant expansion. Next, the flow is pumped through a mechanical screen into an aeration basin having a volume of 1,400,000 gals with three aerators.

The mixed liquor then flows into a final clarifier that is 90 feet in diameter with a 16.5-foot sidewall depth (volume 785,000 gals), and an additional clarifier of similar size is being planned for the expansion. The settled sludge is returned to the aeration basin by three return activated sludge (RAS) centrifugal pumps.

The effluent then flows through the Ultra Violet Disinfection System (rated at 3.8 MGD) before being discharged. A new UV system is being designed to accommodate the additional planned flows in the first and second train combined. The waste activated sludge is pumped into an aeration basin in the second train, followed by dewatering and disposal/reuse as is described later in this report.

Second Train:
The sewage enters the plant headworks through two (2) 54" Raw screw pumps rated at 4,889 gpm each. An additional screw pump of similar size to be used as a back-up is planned for the expansion. The headworks also include a 42" RAS screw pump rated at 2634 gpm. The raw wastewater then flows through a 2.5 foot wide mechanical bar screen followed by a 2.5 foot wide fixed bar screen and a 7.04 MGD capacity grit chamber. Grit system will be evaluated as part of the design build expansion project. An additional bar screen of similar size is being planned for the expansion.

The Raw then mixes with RAS and flows into four aeration basins. Two of the basins are Carrousel Units (volume 920,000 Gal. each) with two aerators in each basin. The other two are oxidation ditches (1,000,000 Gal. each) with two fixed rotors in each basin. Additional aeration equipment four each of the four basin is being planned as part of the design build expansion project.

The mixed liquor then flows into two final clarifiers. Each clarifier is 100 feet in diameter with a 14-foot sidewall depth (820,000 Gal. each). Two additional clarifiers of similar size are being planned for the expansion. The settled sludge is returned to the headworks.

Attachment 5

Salitrillo WWTP
Description of Treatment Process
(Continued)

The effluent then flows through the Ultra Violet Disinfection System (rated at 14.4 MGD) before being discharged. A new UV system/post aeration basin is being designed to accommodate the additional flows in the first and second trains combined as part of the expansion. An effluent re-lift pump station is also being planned for the expansion. The waste activated sludge is pumped to a 2.5 meter belt filter press where it is dewatered followed by either further treatment/reuse or disposal.

The dewatered sludge is disposed of in one of two ways:

1. Hauled to Martinez II WWTP to be composted and/or heat dried, biosolids will be marketed and distributed back into the wholesale/retail landscaping market. The San Antonio River Authority owns both WWTPs.

2. Hauled to BFI Tessman Road Municipal Sold Waste Landfill for final disposal.

Salitrillo Wastewater Discharge Permit Amendment 08/2019
TPDES No. WQ0010749-001 (EPA I.D. TX0053074)

Attachment 6

Type and Dimension of Each Treatment Unit

Reference: Domestic Technical Report 1.0

Section 2 B

Attachment 6

Salatrillo WWTP
Type and Dimensions of Treatment Units

(Existing)

The Salatrillo WWTP is divided between the "Upper" and "Lower" systems, and both flows are combined and discharged to Salatrillo Creek.

Upper Salatrillo WWTP:

Headworks:

Two (2) 2.25 MGD Centrifugal Pumps
One (1) 1.5 MGD Centrifugal Pump
One (1) ¼" Spacing Rotary Mechanical Screen
One (1) 1" Spacing Fixed Bar Screen

Aeration Chamber Dimensions:

Chamber 1: 92'6" x 206'

Clarifiers:

Clarifier 1: 90' Diameter, 13' Side Water Depth

Post Aeration Basin:
One (1) Basin: 22' long x 10' wide x 10' deep

Flow Measurement:
Flow is measured through a 90 degree V-Notch Weir prior to disinfection

UV Disinfection:
One (1) Channel: 28' long x 10' wide x 10' deep

Existing:
Vertical Lamp System to treat 3.75 MGD Peak Flow

Generator:
Spectrum Detroit Diesel, Model 400ds60, 400 KW Capacity

Attachment 6

Salatrillo WWTP
Type and Dimensions of Treatment Units

(Existing)

Lower Salatrillo WWTP:

Headworks:
Two (2) 54" Diameter, 7.0 MGD Screw Pumps (each)
One (1) 42" Diameter, 3.79 MGD Return Activated Sludge Pump
One (1) ¼" Spacing Mechanical Screen
One (1) 1" Spacing Fixed Bar Screen

Aeration Chamber Dimensions:
Two (2) Carrousel Aeration Basins: 174' x 80' x 10' Deep 920,000 gal capacity (each)
Two (2) Oxidation Ditches: 485' x 55' x 5' Deep 1,000,000 gal capacity (each)

Clarifiers:
Two (2) Clarifiers: 100' Diameter, 14'Side Water Depth (each)
800,000 gal capacity (each)

UV Disinfection:
One (1) Channel: 40' long x 3.25' wide x 4' deep

Horizontal Lamp System to treat 10.83 MGD Peak Flow

Flow Measurement:
18" Parshall Flume to measure Lower Plant Flow
24" Parshall Flume to measure combined Upper and Lower Plant Flows (used for TCEQ reporting)

Power Generator:
Caterpillar, Model 3412, 550 KW Capacity

Sludge Dewatering:
2.5 Meter Belt Press

Attachment 6

Salatrillo WWTP
Type and Dimensions of Treatment Units

(Proposed)

The Salatrillo WWTP is divided between the "Upper" and "Lower" systems, and both flows are combined and discharged to Salatrillo Creek.

Upper Salatrillo WWTP:

Headworks:

Proposed:
Two (2) Centrifugal Replacement Pumps (Pump size to be determined)
One (1) Centrifugal Replacement Pump (Pump size to be determined)
One (1) ¼" Spacing Replacement Mechanical Screen

Aeration Chamber Dimensions:

Chamber 1 (Existing): 92'6" x 206'

Clarifiers:

Clarifier 1 (Existing): 90' Diameter, 13' Side Water Depth

Clarifier 1 (Proposed): 90' Diameter, 13' Side Water Depth

Post Aeration Basin:
One (1) Basin: 22' long x 10' wide x 10' deep

Flow Measurement:
Flow is measured through a 90 degree V-Notch Weir prior to disinfection

Generator:
Spectrum Detroit Diesel, Model 400ds60, 400 KW Capacity

Attachment 6

Salatrillo WWTP
Type and Dimensions of Treatment Units

(Proposed)

Lower Salatrillo WWTP:

Headworks:
Two (2) 54" Diameter, 7.0 MGD Screw Pumps (each)
One (1) 54" Diameter, 7.0 MGD Screw Pump (Proposed)
One (1) 42" Diameter, 3.79 MGD Return Activated Sludge Pump
One (1) ¼" Spacing Mechanical Screen
One (1) ¼" Spacing Mechanical Screen (Proposed)
One (1) 1" Spacing Fixed Bar Screen

Aeration Chamber Dimensions:
Two (2) Carrousel Aeration Basins: 174' x 80' x 10' Deep 920,000 gal capacity (each)
Two (2) Oxidation Ditches: 485' x 55' x 5' Deep 1,000,000 gal capacity (each)

Clarifiers:
Two (2) Clarifiers: 100' Diameter, 14'Side Water Depth (each)
800,000 gal capacity (each)

Two (2) Clarifiers (Proposed): 90' Diameter, 13' Side Water Depth

UV Disinfection/Post Aeration:
One (1) Basin: Size and dimensions to be determined

Horizontal Lamp System to treat 11.833 MGD Peak Flow

Effluent Pump Station (Proposed): Size and dimensions to be determined

Flow Measurement:
18" Parshall Flume to measure Lower Plant Flow
24" Parshall Flume to measure combined Upper and Lower Plant Flows (used for TCEQ reporting)

Power Generator:
Caterpillar, Model 3412, 550 KW Capacity

Sludge Dewatering:
2.5 Meter Belt Press

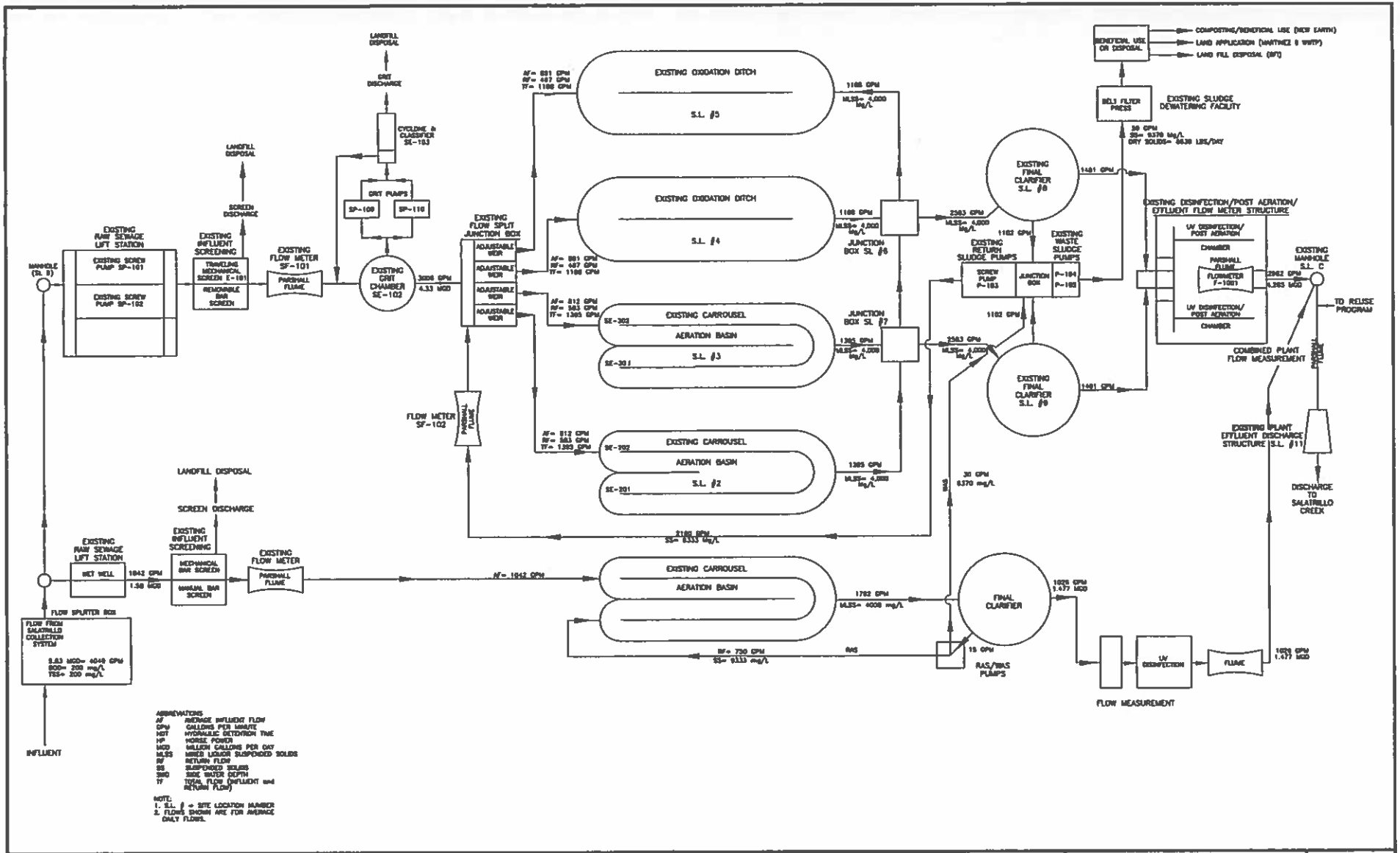
Salitrillo Wastewater Discharge Permit Amendment 08/2019
TPDES No. WQ0010749-001 (EPA I.D. TX0053074)

Attachment 7

Flow Diagram

Reference: Domestic Technical Report 1.0

Section 2 C



NO.	REVISION	DATE	BY

DESCHED BY: JD
DRAWN BY: RDV
CHECKED BY: JD
APPROVED BY: JD
DATE: 7/20/08 FILE: SALFLOW

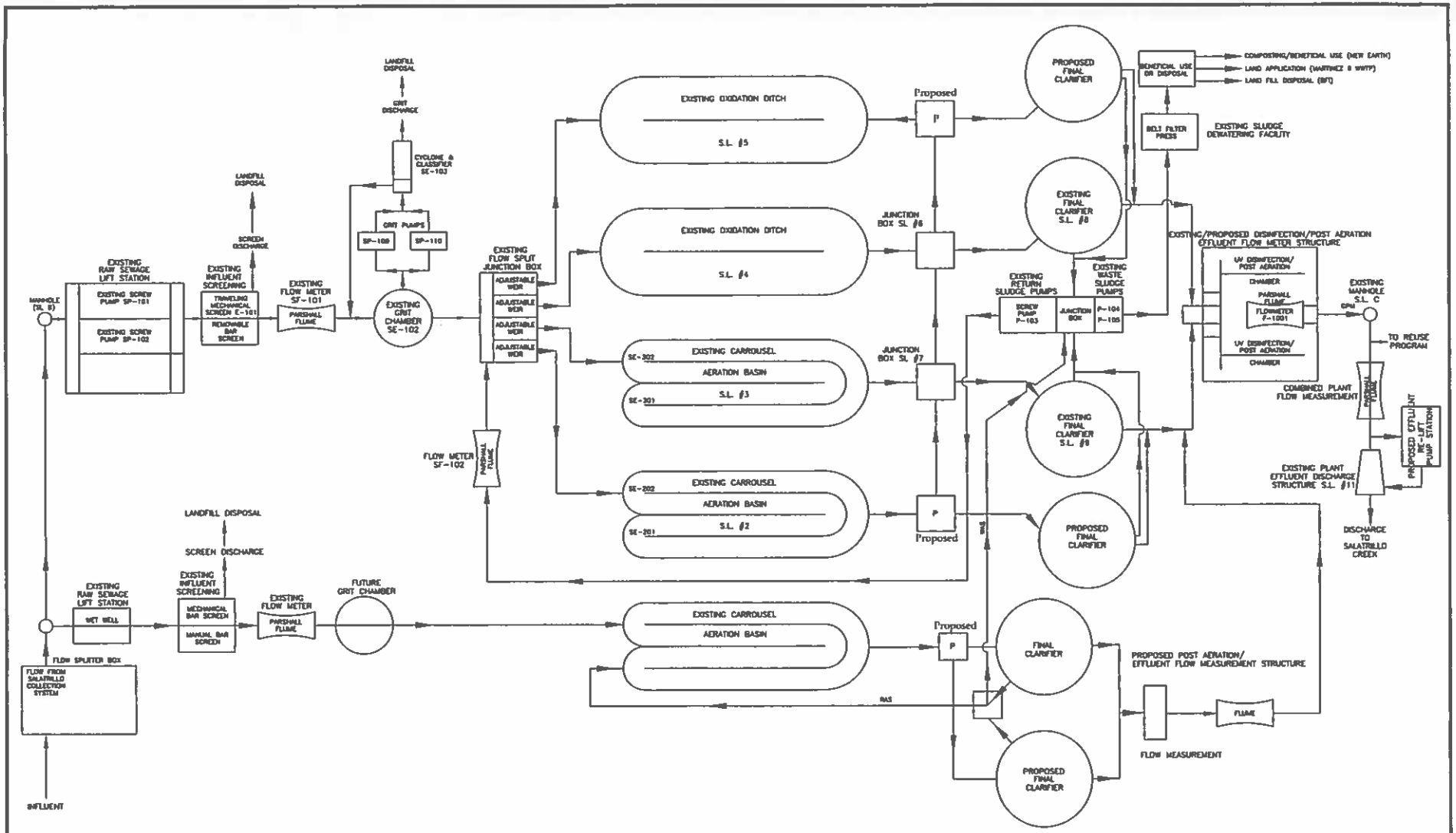
SAN ANTONIO RIVER AUTHORITY
100 E. GUENTHER STREET
P.O. BOX 839980
SAN ANTONIO, TEXAS 78283-9980

VOLUME II - SALATRILLO WWTP

FLOW DIAGRAM EXISTING PHASE

Attachment 7A

SHEET ___ OF ___



NO.	REVISION	DATE	BY

DESIGNED BY: JD
DRAWN BY: WTG
CHECKED BY: JD
APPROVED BY: JD
DATE: 7/12/19 FILE:

SAN ANTONIO RIVER AUTHORITY
100 E. GUENTHER STREET
P.O. BOX 839980
SAN ANTONIO, TEXAS 78283-9980

VOLUME II - SALATRILLO WWTP

FLOW DIAGRAM PROPOSED PHASE

Attachment 7B

SHEET ___ OF ___

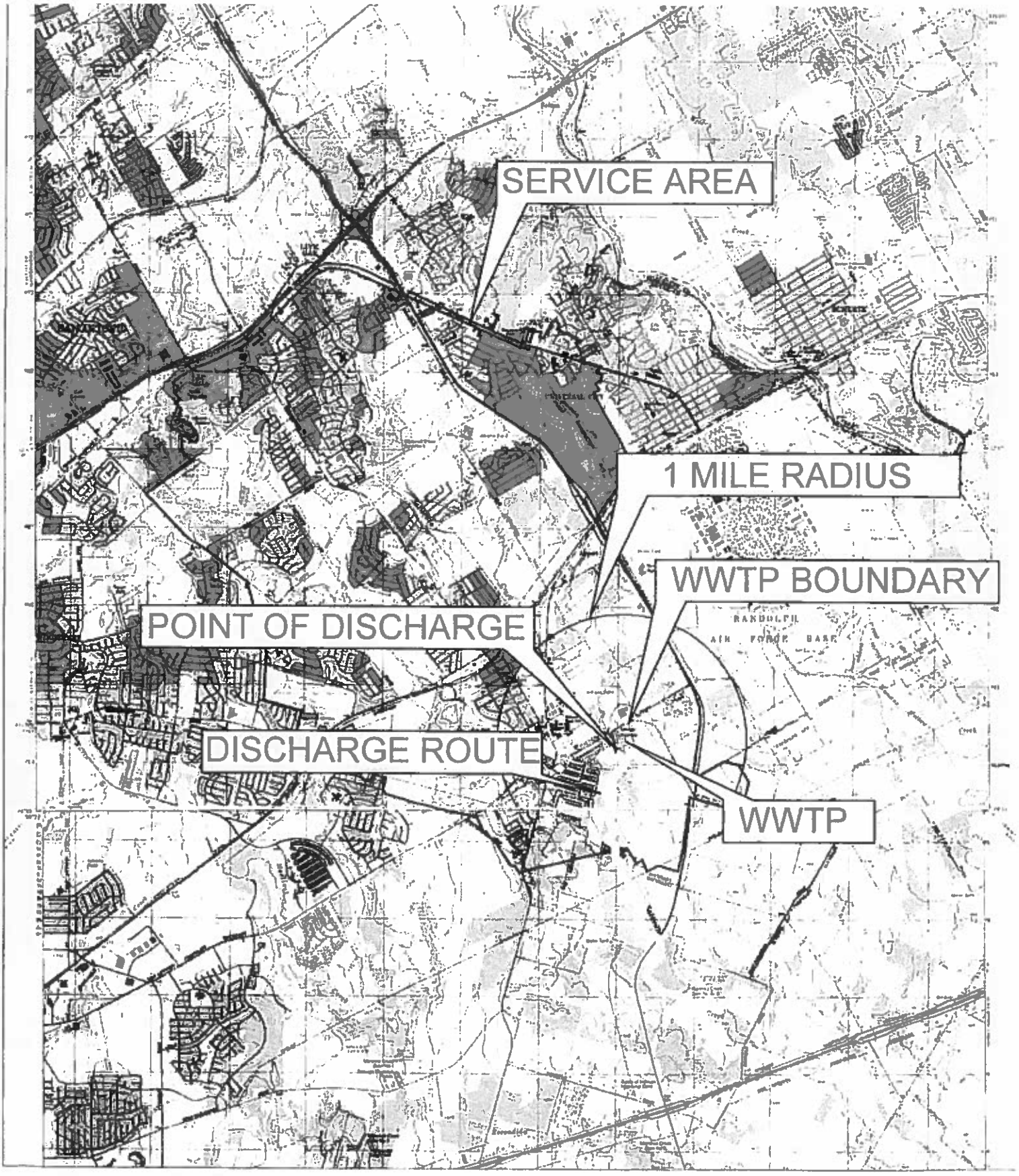
Salitrillo Wastewater Discharge Permit Amendment 08/2019
TPDES No. WQ0010749-001 (EPA I.D. TX0053074)

Attachment 8

Site Drawing

Reference: Domestic Technical Report 1.0

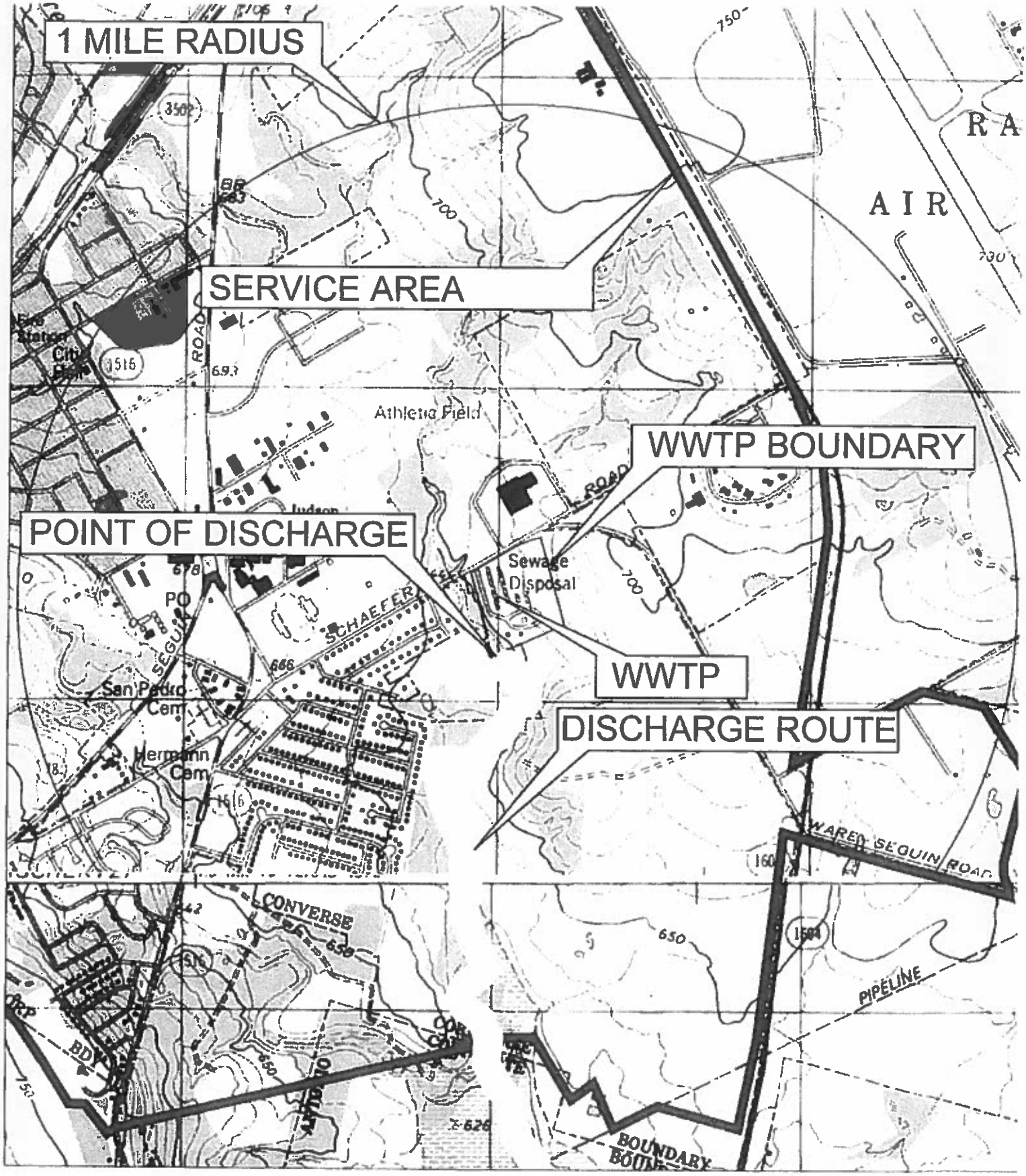
Section 3



.50 0 1 2 Miles

Attachment 8a

Facility Site Drawing and Service Area



Attachment 8b

Facility Site Drawing and Service Area

Salitrillo Wastewater Discharge Permit Amendment 08/2019
TPDES No. WQ0010749-001 (EPA I.D. TX0053074)

Attachment 9

Pollutant Analyses of Treated Effluent

Reference: Domestic Technical Report 1.0

Section 7

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Daniel Flores San Antonio River Authority 100 E. Guenther St San Antonio, TX 78204	Project Name: Salatrillo- TCEQ Major Ren Sample ID: Effluent Matrix: Non-Potable Water Date/Time Taken: 04/04/2019 0700	**PCS Sample #: 548694** **Page 1 of 5** Date/Time Received: 04/04/2019 10:03 Report Date: 04/19/2019 Approved by: Chuck Wallgren Chuck Wallgren, President

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
Ammonia-N (ISE)	0.2	mg/L	0.1	04/04/2019 13:05	SM 4500-NH3 D	CRM
CBOD5	2	mg/L	2	04/04/2019 12:46	SM 5210 B	VBW
Chloride	160	mg/L	1	04/04/2019 21:08	EPA 300.0	PLP
Conductivity, Specific	1,125	µmhos/cm at 25° C	1	04/04/2019 13:51	SM 2510B	JAS
Nitrate-N	5.9	mg/L	0.1	04/04/2019 21:08	EPA 300.0	PLP
Phosphorus, Total	2.24	mg/L	0.10	04/08/2019 05:50	SM 4500-P/B/E	JAS
Sulfate	91	mg/L	1	04/04/2019 21:08	EPA 300.0	PLP

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit
Ammonia-N (ISE)	<1	10	95	108	109	114	105	85 - 115
CBOD5	3	23	N/A	N/A	N/A	N/A	176	167 - 228
Chloride	<1	10	92	99	99	102	104	85 - 115
Conductivity, Specific	N/A	N/A	N/A			N/A		
Nitrate-N	1	20	70	100	99	130	104	85 - 115
Phosphorus, Total	3	10	94	97	100	102	97	85 - 115
Sulfate	1	10	93	99	98	102	107	85 - 115

Quality Statement: ***All supporting quality control data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.***

These analytical results relate only to the sample tested.
All data is reported on an "As Is" basis unless designated as "Dry Wt."
RL = Reporting Limits

QC Data Reported in %, Except BOD in mg/L

Web Site: www.pcslab.net
e-mail: chuck@pcslab.net
Toll Free 800-880-4616
1532 Universal City Blvd, Suite 100
Universal City, TX 78148-3318
210-340-0343
FAX # 210-658-7903

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Daniel Flores San Antonio River Authority 100 E. Guenther St San Antonio, TX 78204	Project Name: Salatrillo- TCEQ Major Ren Sample ID: Effluent Matrix: Non-Potable Water Date/Time Taken: 04/04/2019 0700	**PCS Sample #: 548694** **Page 2 of 5** Date/Time Received: 04/04/2019 10:03 Report Date: 04/19/2019

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
Total Dissolved Solids	616	mg/L	10	04/07/2019 12:10	SM 2540C	JAS
Total Suspended Solids	2	mg/L	1	04/04/2019 13:40	SM 2540 D	CFS
Fluoride	0.58	mg/L	0.10	04/04/2019 21:08	EPA 300.0	PLP
Kjeldahl-N, Total	2	mg/L	1	04/18/2019 09:00	SM 4500-N B/E	CRM
Alkalinity, Total	218	mg/L	10	04/05/2019 11:05	SM 2320 B	CRM
Arsenic/ICP MS	<0.0005	mg/L	0.0005	04/10/2019 11:15	EPA 200.8	DJL
Barium/ICP (Total)	0.066	mg/L	0.003	04/10/2019 11:55	EPA 200.7 / 6010 B	DJL

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit
Total Dissolved Solids	<1	10	N/A	N/A	N/A	N/A		
Total Suspended Solids	<1	10	N/A			N/A		
Fluoride	<1	10	83	100	100	108	103	85 - 115
Kjeldahl-N, Total	<1	10	92	105	105	109	106	85 - 115
Alkalinity, Total	<1	10	95	100	100	107	102	85 - 115
Arsenic/ICP MS	2	20	70	100	99	130	97	85 - 115
Barium/ICP (Total)	10	20	75	96	87	125	100	85 - 115

Quality Statement: ***All supporting quality control data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.***

These analytical results relate only to the sample tested.
All data is reported on an "As Is" basis unless designated as "Dry Wt."
RL = Reporting Limits

QC Data Reported in %, Except BOD in mg/L

Web Site: www.pcslab.net
e-mail: chuck@pcslab.net
Toll Free 800-880-4616
1532 Universal City Blvd, Suite 100
Universal City, TX 78148-3318
210-340-0343
FAX # 210-658-7903

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Daniel Flores San Antonio River Authority 100 E. Guenther St San Antonio, TX 78204	Project Name: Salatrillo- TCEQ Major Ren Sample ID: Effluent Matrix: Non-Potable Water Date/Time Taken: 04/04/2019 0930	**PCS Sample #: 548695** **Page 1 of 1** Date/Time Received: 04/04/2019 10:03 Report Date: 04/18/2019 Approved by: Chuck Wallgren, President

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
Oil and Grease (H.E.M.)		<5.0	mg/L	5	04/05/2019 10:00	EPA 1664	EMV
Mercury/CVAFS		<0.000005	mg/L	0.000005	04/05/2019 12:54	EPA 245.7	DJL
Phenolics	+	See Attached					Pace Analytical Services - Dallas
Cyanide, Amenable	+	See Attached					Pace Analytical Services - Dallas
Volatiles 624		See Attached					Pace Analytical Services - Dallas

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit
Oil and Grease (H.E.M.)	3	18	N/A	N/A	N/A	N/A	88	78 - 114
Mercury/CVAFS	4	20	70			130		
Phenolics	See Attached Report for Quality Assurance Information							
Cyanide, Amenable	See Attached Report for Quality Assurance Information							
Volatiles 624	See Attached Report for Quality Assurance Information							

Quality Statement: ***All supporting quality control data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.***

\+ *Subcontract Work - NELAP Certified Lab*

These analytical results relate only to the sample tested.
All data is reported on an "As Is" basis unless designated as "Dry Wt."
RL = Reporting Limits

QC Data Reported in %, Except BOD in mg/L

Web Site: www.pcslab.net
e-mail: chuck@pcslab.net
Toll Free 800-880-4616
1532 Universal City Blvd, Suite 100
Universal City, TX 78148-3318
210-340-0343
FAX # 210-658-7903

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 02, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22604
Sample Matrix: Non Potable Water

Collection Date/Time: 04/01/2019 11:15
Receipt Date/Time: 04/01/2019 14:12

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB22604-A	E. coli									
	SM 9223B-2004	√	4	MPN/100 mL		1	59891	4/1/19	15:17	SAE
AB22604-A	E. Coli Holding Time - IDEXX Colilert									
	NA		4.03	hours		0.00	59890	4/1/19	15:17	SAE

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
— - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-59891

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			---	Absent	---

Jeanette Hernandez
Quality Assurance Specialist II

4/2/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 05, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22612
Sample Matrix: Non Potable Water

Collection Date/Time: 04/02/2019 11:45
Receipt Date/Time: 04/02/2019 14:00

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB22612-A	E. coli									
	SM 9223B-2004	√	<1	MPN/100 mL		1	59919	4/2/19	15:21	SAE
AB22612-A	E. Coli Holding Time - IDEXX Colilert									
	NA		3.60	hours		0.00	59918	4/2/19	15:21	SAE

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-59919

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			—	Absent	—

Jeanette Hernandez
Quality Assurance Specialist II

4/5/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
— - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 05, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22622
Sample Matrix: Non Potable Water

Collection Date/Time: 04/03/2019 10:48
Receipt Date/Time: 04/03/2019 13:46

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis / Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Analysis Time	Analyst
AB22622-A	E. coli									
	SM 9223B-2004	√	1	MPN/100 mL		1	59930	4/3/19	15:55	SAE
AB22622-A	E. Coli Holding Time - IDEXX Colilert									
	NA		5.12	hours		0.00	59929	4/3/19	15:55	SAE

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-59930

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			---	Absent	---
Log Range for E. coli	0.0000			0.0	---	0.5

Jeanette Hernandez
Quality Assurance Specialist II

4/5/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 05, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263
Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22653
Sample Matrix: Non Potable Water

Collection Date/Time: 04/04/2019 11:35
Receipt Date/Time: 04/04/2019 14:31

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis / Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Analysis Time	Analyst
AB22653-A	E. coli SM 9223B-2004	√	3	MPN/100 mL		1	59962	4/4/19	15:53	SAE/MSR
AB22653-A	E. Coli Holding Time - IDEXX Colilert NA		4.30	hours		0.00	59961	4/4/19	15:53	SAE/MSR

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-59962

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			---	Absent	---

Jeanette Hernandez
Quality Assurance Specialist II

4/5/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 08, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22671
Sample Matrix: Non Potable Water

Collection Date/Time: 04/05/2019 09:40
Receipt Date/Time: 04/05/2019 14:26

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB22671-A	E. coli SM 9223B-2004	√	2	MPN/100 mL		1	59970	4/5/19	16:24	MSR
AB22671-A	E. Coli Holding Time - IDEXX Colilert NA		6.73	hours		0.00	59969	4/5/19	16:24	MSR

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-59970

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			—	Absent	—

Jeanette Hernandez
Quality Assurance Specialist II

4/8/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 09, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22685
Sample Matrix: Non Potable Water

Collection Date/Time: 04/06/2019 10:10
Receipt Date/Time: 04/06/2019 11:44

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB22685-A	E. coli SM 9223B-2004	√	3	MPN/100 mL		1	59976	4/6/19	15:57	GJD/MSR
AB22685-A	E. Coli Holding Time - IDEXX Colilert NA		5.78	hours		0.00	59975	4/6/19	15:57	GJD/MSR

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-59976

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			---	Absent	---

Jeanette Hernandez
Quality Assurance Specialist II

4/9/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 09, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22687
Sample Matrix: Non Potable Water

Collection Date/Time: 04/07/2019 07:50
Receipt Date/Time: 04/07/2019 11:28

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB22687-A	E. coli SM 9223B-2004	√	8	MPN/100 mL		1	59978	4/7/19	13:54	MSR
AB22687-A	E. Coli Holding Time - IDEXX Colilert NA		6.07	hours		0.00	59977	4/7/19	13:54	MSR

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-59978

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			---	Absent	---
Log Range for E. coli	0.3254			0.0	—	0.5

Jeanette Hernandez
Quality Assurance Specialist II

4/9/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22708
Sample Matrix: Non Potable Water

Collection Date/Time: 04/08/2019 13:00
Receipt Date/Time: 04/08/2019 14:52

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB22708-A	E. coli SM 9223B-2004	√	<1	MPN/100 mL		1	60002	4/8/19	16:36	MSR/SAE
AB22708-A	E. Coli Holding Time - IDEXX Colilert NA		3.60	hours		0.00	60001	4/8/19	16:36	MSR/SAE

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60002

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			—	Absent	—

Jeanette Hernandez
Quality Assurance Specialist II

4/9/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 11, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22734
Sample Matrix: Non Potable Water

Collection Date/Time: 04/09/2019 12:40
Receipt Date/Time: 04/09/2019 14:11

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB22734-A	E. coli SM 9223B-2004	√	2	MPN/100 mL		1	60012	4/9/19	15:24	SAE
AB22734-A	E. Coli Holding Time - IDEXX Colilert NA		2.73	hours		0.00	60011	4/9/19	15:24	SAE

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60012

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			---	Absent	---

Jeanette Hernandez
Quality Assurance Specialist II

4/11/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 15, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263
Fax #:210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22745
Sample Matrix: Non Potable Water

Collection Date/Time: 04/10/2019 09:10
Receipt Date/Time: 04/10/2019 13:38

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis / Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Analysis Time	Analyst
AB22745-A	E. coli									
	SM 9223B-2004	√	3	MPN/100 mL		1	60040	4/10/19	15:37	BG/SAE
AB22745-A	E. Coli Holding Time - IDEXX Colilert									
	NA		6.45	hours		0.00	60039	4/10/19	15:37	BG/SAE

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60040

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			---	Absent	---
Log Range for E. coli	0.3118			0.0	---	0.5

Patricia M. Carvajal
Quality Assurance Supervisor

4/15/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 15, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263
Fax #:210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22784
Sample Matrix: Non Potable Water

Collection Date/Time: 04/11/2019 12:35
Receipt Date/Time: 04/11/2019 14:00

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted. For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

QC Analysis Comments: E_COLI_QUANTITRAY-60051 — Log Range for E. coli
Log range specifications not applicable to sample results less than or equal to 10 MPN/100 mL.

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Analysis Time	Analyst
AB22784-A	E. coli SM 9223B-2004	√	3	MPN/100 mL		1	60051	4/11/19	14:54	SAE/MSR
AB22784-A	E. Coli Holding Time - IDEXX Colilert NA		2.32	hours		0.00	60050	4/11/19	14:54	SAE/MSR

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60051

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			—	Absent	—
Log Range for E. coli	0.7076		*A	0.0	—	0.5

Patricia M. Carvajal
Quality Assurance Supervisor

4/15/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
— - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 15, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263
Fax #:210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22793
Sample Matrix: Non Potable Water

Collection Date/Time: 04/12/2019 10:55
Receipt Date/Time: 04/12/2019 13:25

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted. For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis / Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Analysis Time	Analyst
AB22793-A	E. coli									
	SM 9223B-2004	√	<1	MPN/100 mL		1	60057	4/12/19	14:56	MSR/GJD
AB22793-A	E. Coli Holding Time - IDEXX Colilert									
	NA		4.02	hours		0.00	60056	4/12/19	14:56	MSR/GJD

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
— - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60057

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			—	Absent	—

Patricia M. Carvajal
Quality Assurance Supervisor

4/15/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 17, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #:210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22801
Sample Matrix: Non Potable Water

Collection Date/Time: 04/13/2019 08:00
Receipt Date/Time: 04/13/2019 10:03

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis / Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Analysis Time	Analyst
AB22801-A	E. coli									
	SM 9223B-2004	√	1	MPN/100 mL		1	60064	4/13/19	15:29	GJD/SAE
AB22801-A	E. Coli Holding Time - IDEXX Colilert									
	NA		7.48	hours		0.00	60063	4/13/19	15:29	GJD/SAE

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60064

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			---	Absent	---

Patricia M. Carvajal
Quality Assurance Supervisor

4/17/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 17, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263
Fax #:210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22806
Sample Matrix: Non Potable Water

Collection Date/Time: 04/14/2019 09:55
Receipt Date/Time: 04/14/2019 10:53

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis / Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Analysis Time	Analyst
AB22806-A	E. coli									
	SM 9223B-2004	√	3	MPN/100 mL		1	60066	4/14/19	15:31	MSR/SAE
AB22806-A	E. Coli Holding Time - IDEXX Colilert									
	NA		5.60	hours		0.00	60065	4/14/19	15:31	MSR/SAE

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
— - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60066

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			—	Absent	—

Patricia M. Carvajal
Quality Assurance Supervisor

4/17/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 18, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22829
Sample Matrix: Non Potable Water

Collection Date/Time: 04/15/2019 12:30
Receipt Date/Time: 04/15/2019 14:17

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted. For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB22829-A	E. coli SM 9223B-2004	√	1	MPN/100 mL		1	60077	4/15/19	15:59	SAE/DAZ
AB22829-A	E. Coli Holding Time - IDEXX Colilert NA		3.48	hours		0.00	60076	4/15/19	15:59	SAE/DAZ

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
— - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60077

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			—	Absent	—

Jeanette Hernandez
Quality Assurance Specialist II

4/18/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
— - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 18, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22837
Sample Matrix: Non Potable Water

Collection Date/Time: 04/16/2019 11:05
Receipt Date/Time: 04/16/2019 14:04

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB22837-A	E. coli SM 9223B-2004	√	3	MPN/100 mL		1	60094	4/16/19	16:58	AM/SAE
AB22837-A	E. Coli Holding Time - IDEXX Colilert NA		5.88	hours		0.00	60093	4/16/19	16:58	AM/SAE

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60094

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			---	Absent	---

Jeanette Hernandez
Quality Assurance Specialist II

4/18/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 23, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22855
Sample Matrix: Non Potable Water

Collection Date/Time: 04/17/2019 09:23
Receipt Date/Time: 04/17/2019 14:27

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted. For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB22855-A	E. coli SM 9223B-2004	√	1	MPN/100 mL		1	60103	4/17/19	15:52	SAE
AB22855-A	E. Coli Holding Time - IDEXX Colilert NA		6.48	hours		0.00	60102	4/17/19	15:52	SAE

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60103

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			---	Absent	---

Jeanette Hernandez
Quality Assurance Specialist II

4/23/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 23, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22887
Sample Matrix: Non Potable Water

Collection Date/Time: 04/18/2019 08:05
Receipt Date/Time: 04/18/2019 14:08

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted. For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB22887-A	E. coli SM 9223B-2004	√	5	MPN/100 mL		1	60119	4/18/19	15:13	SAE/MSR
AB22887-A	E. Coli Holding Time - IDEXX Colilert NA		7.13	hours		0.00	60118	4/18/19	15:13	SAE/MSR

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
— - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60119

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			—	Absent	—

Jeanette Hernandez
Quality Assurance Specialist II

4/23/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 23, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22905
Sample Matrix: Non Potable Water

Collection Date/Time: 04/19/2019 10:45
Receipt Date/Time: 04/19/2019 15:00

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB22905-A	E. coli SM 9223B-2004	√	4	MPN/100 mL		1	60137	4/19/19	16:29	MSR
AB22905-A	E. Coli Holding Time - IDEXX Colilert NA		5.73	hours		0.00	60136	4/19/19	16:29	MSR

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
— - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60137

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			—	Absent	—

Jeanette Hernandez
Quality Assurance Specialist II

4/23/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
— - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 25, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22914
Sample Matrix: Non Potable Water

Collection Date/Time: 04/20/2019 07:50
Receipt Date/Time: 04/20/2019 13:00

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted. For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB22914-A	E. coli SM 9223B-2004	√	2	MPN/100 mL		1	60144	4/20/19	15:02	MSR/SAE
AB22914-A	E. Coli Holding Time - IDEXX Colilert NA		7.20	hours		0.00	60143	4/20/19	15:02	MSR/SAE

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60144

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			---	Absent	---
Log Range for E. coli	0.3010			0.0	---	0.5

Jeanette Hernandez
Quality Assurance Specialist II

4/25/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 25, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22919
Sample Matrix: Non Potable Water

Collection Date/Time: 04/21/2019 07:45
Receipt Date/Time: 04/21/2019 10:01

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted. For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB22919-A	E. coli SM 9223B-2004	√	2	MPN/100 mL		1	60146	4/21/19	15:06	MSR/SAE
AB22919-A	E. Coli Holding Time - IDEXX Colilert NA		7.35	hours		0.00	60145	4/21/19	15:06	MSR/SAE

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60146

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			---	Absent	---

Jeanette Hernandez
Quality Assurance Specialist II

4/25/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 23, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22934
Sample Matrix: Non Potable Water

Collection Date/Time: 04/22/2019 11:30
Receipt Date/Time: 04/22/2019 13:56

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB22934-A	E. coli									
	SM 9223B-2004	√	3	MPN/100 mL		1	60155	4/22/19	15:12	SAE
AB22934-A	E. Coli Holding Time - IDEXX Colilert									
	NA		3.70	hours		0.00	60154	4/22/19	15:12	SAE

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60155

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			—	Absent	—

Jeanette Hernandez
Quality Assurance Specialist II

4/23/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
— - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 25, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22948
Sample Matrix: Non Potable Water

Collection Date/Time: 04/23/2019 11:16
Receipt Date/Time: 04/23/2019 14:10

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB22948-A	E. coli									
	SM 9223B-2004	√	5	MPN/100 mL		1	60160	4/23/19	16:15	SAE
AB22948-A	E. Coli Holding Time - IDEXX Colilert									
	NA		4.98	hours		0.00	60159	4/23/19	16:15	SAE

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60160

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			---	Absent	---

Jeanette Hernandez
Quality Assurance Specialist II

4/25/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 29, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263
Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22969
Sample Matrix: Non Potable Water

Collection Date/Time: 04/24/2019 07:48
Receipt Date/Time: 04/24/2019 14:10

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB22969-A	E. coli SM 9223B-2004	√	8	MPN/100 mL		1	60173	4/24/19	15:26	SAE
AB22969-A	E. Coli Holding Time - IDEXX Colilert NA		7.63	hours		0.00	60172	4/24/19	15:26	SAE

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY
600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60173

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			---	Absent	---

Rebecca S. Reeves

4/29/2019

Rebecca S. Reeves
Senior Quality Conrol & Monitoring Supervisor

Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

April 29, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB22996
Sample Matrix: Non Potable Water

Collection Date/Time: 04/25/2019 11:13
Receipt Date/Time: 04/25/2019 13:49

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB22996-A	E. coli SM 9223B-2004	√	1	MPN/100 mL		1	60206	4/25/19	14:49	SAE/MD
AB22996-A	E. Coli Holding Time - IDEXX Colilert NA		3.60	hours		0.00	60205	4/25/19	14:49	SAE/MD

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60206

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			---	Absent	---

Rebecca S. Reeves

4/29/2019

Rebecca S. Reeves
Senior Quality Conrol & Monitoring Supervisor

Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

May 01, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB23033
Sample Matrix: Non Potable Water

Collection Date/Time: 04/26/2019 08:05
Receipt Date/Time: 04/26/2019 12:47

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB23033-A	E. coli SM 9223B-2004	√	1	MPN/100 mL		1	60220	4/26/19	13:33	MD/MSR
AB23033-A	E. Coli Holding Time - IDEXX Colilert NA		5.47	hours		0.00	60219	4/26/19	13:33	MD/MSR

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60220

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			---	Absent	---

Jeanette Hernandez
Quality Assurance Specialist II

5/1/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

May 01, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB23039
Sample Matrix: Non Potable Water

Collection Date/Time: 04/27/2019 08:00
Receipt Date/Time: 04/27/2019 11:05

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB23039-A	E. coli									
	SM 9223B-2004	√	4	MPN/100 mL		1	60224	4/27/19	15:30	MSR
AB23039-A	E. Coli Holding Time - IDEXX Colilert									
	NA		7.50	hours		0.00	60223	4/27/19	15:30	MSR

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60224

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			---	Absent	---

Jeanette Hernandez
Quality Assurance Specialist II

5/1/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

May 01, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB23043
Sample Matrix: Non Potable Water

Collection Date/Time: 04/28/2019 08:05
Receipt Date/Time: 04/28/2019 09:30

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB23043-A	E. coli SM 9223B-2004	√	7	MPN/100 mL		1	60228	4/28/19	15:49	MSR/SAE
AB23043-A	E. Coli Holding Time - IDEXX Colilert NA		7.73	hours		0.00	60227	4/28/19	15:49	MSR/SAE

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
— - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60228

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			---	Absent	---

Jeanette Hernandez
Quality Assurance Specialist II

5/1/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

May 03, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263 Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB23060
Sample Matrix: Non Potable Water

Collection Date/Time: 04/29/2019 11:30
Receipt Date/Time: 04/29/2019 14:50

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

Analysis Comments: **AB23060-A** E. coli
Utility sample greater than 25 MPN/100mL.

ANALYTICAL RESULTS

	Analysis Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB23060-A	E. coli									
	SM 9223B-2004	√	60	MPN/100 mL	*A	1	60254	4/29/19	16:23	SAE
AB23060-A	E. Coli Holding Time - IDEXX Colilert									
	NA		4.88	hours		0.00	60253	4/29/19	16:23	SAE

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable
H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit
* - See Case Narrative
— - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60254

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			---	Absent	---

Jeanette Hernandez
Quality Assurance Specialist II

5/3/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

May 01, 2019

Customer: SARA - Salatrillo WWTP
Daniel Flores
1280 S. FM 1516
San Antonio, TX 78263
Fax #: 210-661-9324

Sample Location: Salatrillo Effluent 1522-01 E. coli MPN
Sample Number: AB23076
Sample Matrix: Non Potable Water

Collection Date/Time: 04/30/2019 10:25
Receipt Date/Time: 04/30/2019 14:40

CASE NARRATIVE

This report provides results related only to the referenced sample ID numbers. All samples were received in acceptable condition unless otherwise noted.
For questions regarding this report, please contact Shannon Tollison, Laboratory Supervisor, at (210) 302-3275.

Analysis identified with a "√" complies with NELAP requirements unless otherwise specified in the case narrative.

No sample and/or analysis comment(s)

ANALYTICAL RESULTS

	Analysis / Analysis Method	NELAP	Result	Units	Qualifier	Reporting Limit	QC Batch #	Analysis Date	Time	Analyst
AB23076-A	E. coli SM 9223B-2004	√	11	MPN/100 mL		1	60269	4/30/19	16:35	SAE
AB23076-A	E. Coli Holding Time - IDEXX Colilert NA		6.17	hours		0.00	60268	4/30/19	16:35	SAE

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

SAN ANTONIO RIVER AUTHORITY

600 E. Euclid
San Antonio, TX 78212-4405

Environmental Sciences Department Laboratory

ANALYTICAL REPORT

QC ANALYTICAL RESULTS

QC Batch Name: E_COLI_QUANTITRAY-60269

QC Analyte Name	Result	Units	Qualifier	Acceptance Criteria Lower	Target	Upper
Initial Blank for E. coli	Absent			—	Absent	—

Jeanette Hernandez
Quality Assurance Specialist II

5/1/2019
Date

A - Outside upper acceptance criteria
D - Outside lower acceptance criteria
T - Microbiological Controls were unacceptable

H - Hold Time for preparation or analysis exceeded
J - Analyte detected outside quantitation limit

* - See Case Narrative
--- - Not Applicable

Salatrillo WWTP

Apr-19	Apr-19 METERED EFF. FLOW M.G.D.	COMP FLOW M.G.D.	RAW						EFFLUENT									SLUDGE DEPTHS			WEATHER				TEST TIME		NAME
			D.O.	TEMP	PH				D.O.	TEMP	PH		E. COLI					701	801	901	RAIN	TEMP	SKY	WIND	PH	D.O.	
1	4,004,374	4.004	0.07	23.2	8.1				9.73	18.8	7.6		4					36"	36"	60"	0.00	48	CLDY	N-8	8:06 AM	8:10 AM	TK
2	4,027,872	4.028	0.26	23.1	8.0				8.98	18.7	7.7		1					24"	36"	48"	0.00	45	P/C	WNW-3	8:36 AM	8:40 AM	DE
3	4,215,097	4.215	0.08	23.4	7.7				8.21	19.6	7.7		1					36"	36"	60"	0.05	58	CLDY	SE-6	8:40 AM	8:35 AM	DE
4	4,092,104	4.092	0.08	23.4	7.9				7.49	23.4	7.8		3					30"	36"	54"	0.00	66	P/C	S-6	8:14 AM	8:05 AM	DE
5	4,056,736	4.057	0.09	23.5	8.0				7.39	22.3	7.7		2					36"	36"	60"	0.00	59	P/C	WNW-6	8:30 AM	8:25 AM	DE
6	4,288,044	4.288							7.20	23.1			3					48"	24"	48"	0.52	70	CLDY	E-6		8:00 AM	JR
7	5,945,352	5.945							7.24	23.4			8					42"	40"	55"	0.70	63	CLDY	W-14		7:55 AM	JR
8	5,267,631	5.268											1					72"	72"	60"	0.00	70	CLEAR	WNW-7			RC
9	4,672,502	4.673	0.08	23.3	7.7				7.55	22.4	7.9		2					60"	12"	60"	0.00	77	CLEAR	SE-2	10:15 AM	8:55 AM	RC
10	4,618,256	4.618	0.08	23.7	7.9				7.49	22.7	7.7		3					60"	12"	60"	0.00	82	CLEAR	SSE-6	8:04 AM	7:54 AM	TK
11	4,416,514	4.417	0.11	23.4	7.8				7.34	22.8	7.8		3					36"	60"	84"	0.00	80	P/C	N-9	10:44 AM	7:45 AM	TK
12	4,115,362	4.115	0.10	23.7	8.0				7.77	21.5	7.7		1					48"	24"	72"	0.00	60	P/C	NE-9	8:08 AM	8:01 AM	TK
13	4,610,407	4.610							7.22	22.5			1					36"	30"	60"	0.30	67	CLDY	ENE-5		7:25 AM	DE
14	4,748,723	4.749							7.50	21.2			3					30"	24"	60"	0.00	45	CLEAR	WNW-7		8:40 AM	DE
15	4,529,019	4.529	0.15	23.5	7.6				7.82	20.6	7.8		1					39"	114"	72"	0.00	79	CLEAR	S-12	12:41 PM	8:44 AM	TK
16	4,299,408	4.299	0.08	24.0	7.5				7.77	21.7	7.5		3					24"	84"	90"	0.75	69	CLDY	SE-15	9:43 AM	8:05 AM	DE
17	4,420,094	4.420	0.10	24.1	7.7				7.40	22.9	7.4		1					24"	60"	78"	0.00	71	CLDY	SE-15	8:37 AM	8:08 AM	DE
18	5,402,706	5.403	0.08	23.4	7.5				7.36	23.3	7.7		5					48"	84"	96"	0.00	60	P/C	W-5	1:54 PM	8:20 AM	DE
19	4,933,438	4.933	0.09	23.6	7.8				7.46	21.9	7.7		4					48"	76"	66"	0.00	67	CLEAR	NNW-18	9:58 AM	8:40 AM	RC
20	4,802,906	4.803							7.00	21.6			2					48"	54"	60"	0.00	51	CLEAR	WNW-3		7:20 AM	RC
21	4,911,955	4.912							7.34	22.1			2					42"	48"	60"	0.00	57	CLEAR	S-6		7:15 AM	RC
22	4,599,757	4.600	0.20	24.2	7.8				6.97	23.0	7.7		3					48"	66"	72"	0.00	68	CLDY	SE-13	9:47 AM	8:25 AM	DE
23	4,456,703	4.457	0.13	24.4	7.7				7.24	23.3	7.6		5					60"	72"	72"	0.15	73	M/C	SE-17	8:03 AM	8:06 AM	TK
24	4,896,344	4.896	0.09	24.2	7.4				7.10	23.5	7.8		8					48"	60"	84"	0.46	67	CLDY	ENE-10	8:01 AM	7:58 AM	DE
25	5,010,616	5.011	0.20	23.8	7.5				7.45	22.1	7.5		1					48"	72"	84"	0.00	64	CLEAR	W-10	12:45 PM	8:25 AM	TK
26	4,752,996	4.753							7.41	22.1	7.6		1					60"	60"	60"	0.00	62	CLEAR	N-9	7:26 AM	7:20 AM	TK
27	4,734,053	4.734							7.04	22.1			4					60"	48"	72"	0.00	61	CLEAR	SSW-3		7:45 AM	TK
28	4,878,077	4.878							6.93	23.6			7					33"	60"	60"	0.00	66	CLDY	SSE-5		7:42 AM	TK
29	4,376,146	4.376	0.09	24.6	7.7				7.06	24.0	7.6		60					24"	84"	96"	0.00	70	CLDY	SE-10	9:39 AM	8:13 AM	DE
30	4,356,196	4.356	0.09	24.5	7.5				7.04	24.4	7.8		11					30"	78"	90"	0.00	75	CLDY	SE-14	10:28 AM	8:20 AM	DE
31																											
										Goo avg			3														
Total	138,439,388								9.73	High DO	7.9	High PH	E-Coli Max AVG126								Total Rain	AVG TEMP					
AVG	4,614,646								6.93	Low DO	7.4	low PH	E-Coli Max 394								2.93	65					

Salitrillo Wastewater Discharge Permit Amendment 08/2019
TPDES No. WQ0010749-001 (EPA I.D. TX0053074)

Attachment 10

Pollutant Analyses Requirements

Reference: Domestic Technical Report 4.0

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Daniel Flores San Antonio River Authority 100 E. Guenther St San Antonio, TX 78204	Project Name: Salatrillo- TCEQ Major Ren Sample ID: Effluent Matrix: Non-Potable Water Date/Time Taken: 04/04/2019 0700	**PCS Sample #: 548694** **Page 1 of 5** Date/Time Received: 04/04/2019 10:03 Report Date: 04/19/2019 Approved by: Chuck Wallgren Chuck Wallgren, President

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
Ammonia-N (ISE)	0.2	mg/L	0.1	04/04/2019 13:05	SM 4500-NH3 D	CRM
CBOD5	2	mg/L	2	04/04/2019 12:46	SM 5210 B	VBW
Chloride	160	mg/L	1	04/04/2019 21:08	EPA 300.0	PLP
Conductivity, Specific	1,125	µmhos/cm at 25° C	1	04/04/2019 13:51	SM 2510B	JAS
Nitrate-N	5.9	mg/L	0.1	04/04/2019 21:08	EPA 300.0	PLP
Phosphorus, Total	2.24	mg/L	0.10	04/08/2019 05:50	SM 4500-P/B/E	JAS
Sulfate	91	mg/L	1	04/04/2019 21:08	EPA 300.0	PLP

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit
Ammonia-N (ISE)	<1	10	95	108	109	114	105	85 - 115
CBOD5	3	23	N/A	N/A	N/A	N/A	176	167 - 228
Chloride	<1	10	92	99	99	102	104	85 - 115
Conductivity, Specific	N/A	N/A	N/A			N/A		
Nitrate-N	1	20	70	100	99	130	104	85 - 115
Phosphorus, Total	3	10	94	97	100	102	97	85 - 115
Sulfate	1	10	93	99	98	102	107	85 - 115

Quality Statement: ***All supporting quality control data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.***

These analytical results relate only to the sample tested.
All data is reported on an "As Is" basis unless designated as "Dry Wt."
RL = Reporting Limits

QC Data Reported in %, Except BOD in mg/L

Web Site: www.pcslab.net
e-mail: chuck@pcslab.net
Toll Free 800-880-4616
1532 Universal City Blvd, Suite 100
Universal City, TX 78148-3318
210-340-0343
FAX # 210-658-7903

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Daniel Flores San Antonio River Authority 100 E. Guenther St San Antonio, TX 78204	Project Name: Salatrillo- TCEQ Major Ren Sample ID: Effluent Matrix: Non-Potable Water Date/Time Taken: 04/04/2019 0700	**PCS Sample #: 548694** **Page 2 of 5** Date/Time Received: 04/04/2019 10:03 Report Date: 04/19/2019

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
Total Dissolved Solids	616	mg/L	10	04/07/2019 12:10	SM 2540C	JAS
Total Suspended Solids	2	mg/L	1	04/04/2019 13:40	SM 2540 D	CFS
Fluoride	0.58	mg/L	0.10	04/04/2019 21:08	EPA 300.0	PLP
Kjeldahl-N, Total	2	mg/L	1	04/18/2019 09:00	SM 4500-N B/E	CRM
Alkalinity, Total	218	mg/L	10	04/05/2019 11:05	SM 2320 B	CRM
Arsenic/ICP MS	<0.0005	mg/L	0.0005	04/10/2019 11:15	EPA 200.8	DJL
Barium/ICP (Total)	0.066	mg/L	0.003	04/10/2019 11:55	EPA 200.7 / 6010 B	DJL

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit
Total Dissolved Solids	<1	10	N/A	N/A	N/A	N/A		
Total Suspended Solids	<1	10	N/A			N/A		
Fluoride	<1	10	83	100	100	108	103	85 - 115
Kjeldahl-N, Total	<1	10	92	105	105	109	106	85 - 115
Alkalinity, Total	<1	10	95	100	100	107	102	85 - 115
Arsenic/ICP MS	2	20	70	100	99	130	97	85 - 115
Barium/ICP (Total)	10	20	75	96	87	125	100	85 - 115

Quality Statement: ***All supporting quality control data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.***

These analytical results relate only to the sample tested.
All data is reported on an "As Is" basis unless designated as "Dry Wt."
RL = Reporting Limits

QC Data Reported in %, Except BOD in mg/L

Web Site: www.pcslab.net
e-mail: chuck@pcslab.net
Toll Free 800-880-4616
1532 Universal City Blvd, Suite 100
Universal City, TX 78148-3318
210-340-0343
FAX # 210-658-7903

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Daniel Flores San Antonio River Authority 100 E. Guenther St San Antonio, TX 78204	Project Name: Salatrillo- TCEQ Major Ren Sample ID: Effluent Matrix: Non-Potable Water Date/Time Taken: 04/04/2019 0700	**PCS Sample #: 548694** **Page 3 of 5** Date/Time Received: 04/04/2019 10:03 Report Date: 04/19/2019

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
Cadmium/ICP (Total)	0.001	mg/L	0.001	04/10/2019 11:55	EPA 200.7 / 6010 B	DJL
Chromium/ICP (Total)	<0.003	mg/L	0.003	04/10/2019 11:55	EPA 200.7 / 6010 B	DJL
Copper/ICP (Total)	0.004	mg/L	0.002	04/10/2019 11:55	EPA 200.7 / 6010 B	DJL
Lead/ICP MS	<0.0005	mg/L	0.0005	04/10/2019 11:15	EPA 200.8	DJL
Aluminum/ICP (Total)	0.029	mg/L	0.0025	04/10/2019 13:29	EPA 200.7 / 6010 B	DJL
Beryllium/ICP (Total)	<0.0005	mg/L	0.0005	04/10/2019 11:55	EPA 200.7 / 6010 B	DJL
Trivalent Chromium	<0.003	mg/L	N/A	04/10/2019 11:55	Calculation	DJL

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit
Cadmium/ICP (Total)	3	20	75	96	93	125	100	85 - 115
Chromium/ICP (Total)	2	20	75	92	90	125	100	85 - 115
Copper/ICP (Total)	<1	20	75	97	97	125	100	85 - 115
Lead/ICP MS	<1	20	70	108	108	130	106	85 - 115
Aluminum/ICP (Total)	<1	20	75	103	103	125	100	85 - 115
Beryllium/ICP (Total)	2	20	75	96	94	125	100	85 - 115
Trivalent Chromium	N/A	N/A	N/A			N/A		

Quality Statement: ***All supporting quality control data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.***

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FAX # 210-658-7903

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Daniel Flores San Antonio River Authority 100 E. Guenther St San Antonio, TX 78204	Project Name: Salatrillo- TCEQ Major Ren Sample ID: Effluent Matrix: Non-Potable Water Date/Time Taken: 04/04/2019 0700	**PCS Sample #: 548694** **Page 4 of 5** Date/Time Received: 04/04/2019 10:03 Report Date: 04/19/2019

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
Hexavalent Chrome	R	<0.003	mg/L	0.003	04/04/2019 16:30	SM 3500-Cr D	DJL
Zinc/ICP (Total)		0.039	mg/L	0.010	04/10/2019 11:55	EPA 200.7 / 6010 B	DJL
Antimony/ICP MS		<0.005	mg/L	0.005	04/10/2019 11:15	EPA 200.8	DJL
Thallium/ICP MS		<0.0005	mg/L	0.0005	04/10/2019 11:15	EPA 200.8	DJL
Nickel/ICP MS		0.004	mg/L	0.002	04/10/2019 11:15	EPA 200.8	DJL
Selenium/ICP MS		<0.005	mg/L	0.005	04/10/2019 11:15	EPA 200.8	DJL
Silver/ICP MS		<0.0005	mg/L	0.0005	04/10/2019 11:15	EPA 200.8	DJL

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit
Hexavalent Chrome	<1	20	75	*73	*73	125	100	85 - 115
Zinc/ICP (Total)	<1	20	75	88	88	125	100	85 - 115
Antimony/ICP MS	<1	20	70	107	108	130	110	85 - 115
Thallium/ICP MS	<1	20	70	106	107	130	104	85 - 115
Nickel/ICP MS	2	20	70	105	102	130	99	85 - 115
Selenium/ICP MS	<1	20	70	105	105	130	104	85 - 115
Silver/ICP MS	<1	20	70	89	88	130	99	85 - 115

Quality Statement: ***All supporting quality control data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.***

R *Spike recovery outside control limits due to matrix effect - LCS within limits*

* *Approved for release per QA Plan, Exception to Limits - QAM Section 13-4*

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POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Daniel Flores San Antonio River Authority 100 E. Guenther St San Antonio, TX 78204	Project Name: Salatrillo- TCEQ Major Ren Sample ID: Effluent Matrix: Non-Potable Water Date/Time Taken: 04/04/2019 0700	**PCS Sample #: 548694** **Page 5 of 5** Date/Time Received: 04/04/2019 10:03 Report Date: 04/19/2019

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
Pesticides 617	See Attached					Pace Analytical Services - Dallas
604.1 Hexachlorophene	See Attached					Pace Analytical Services - Dallas
Semi Volatiles 625	See Attached					Pace Analytical Services - Dallas
Pesticides 632	See Attached					Pace Analytical Services - Dallas
Pesticide 1657	See Attached					Pace Analytical Services - Dallas
Herbicides 615	See Attached					Pace Analytical Services - Dallas
608 PCBs	See Attached					Pace Analytical Services - Dallas

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit
Pesticides 617	See Attached Report for Quality Assurance Information							
604.1 Hexachlorophene	See Attached Report for Quality Assurance Information							
Semi Volatiles 625	See Attached Report for Quality Assurance Information							
Pesticides 632	See Attached Report for Quality Assurance Information							
Pesticide 1657	See Attached Report for Quality Assurance Information							
Herbicides 615	See Attached Report for Quality Assurance Information							
608 PCBs	See Attached Report for Quality Assurance Information							

Quality Statement: *All supporting quality control data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.*

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Universal City, TX 78148-3318
210-340-0343
FAX # 210-658-7903

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Daniel Flores San Antonio River Authority 100 E. Guenther St San Antonio, TX 78204	Project Name: Salatrillo- TCEQ Major Ren Sample ID: Effluent Matrix: Non-Potable Water Date/Time Taken: 04/04/2019 0930	**PCS Sample #: 548695** **Page 1 of 1** Date/Time Received: 04/04/2019 10:03 Report Date: 04/18/2019 Approved by: Chuck Wallgren, President

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
Oil and Grease (H.E.M.)		<5.0	mg/L	5	04/05/2019 10:00	EPA 1664	EMV
Mercury/CVAFS		<0.000005	mg/L	0.000005	04/05/2019 12:54	EPA 245.7	DJL
Phenolics	+	See Attached					Pace Analytical Services - Dallas
Cyanide, Amenable	+	See Attached					Pace Analytical Services - Dallas
Volatiles 624		See Attached					Pace Analytical Services - Dallas

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit
Oil and Grease (H.E.M.)	3	18	N/A	N/A	N/A	N/A	88	78 - 114
Mercury/CVAFS	4	20	70			130		
Phenolics	See Attached Report for Quality Assurance Information							
Cyanide, Amenable	See Attached Report for Quality Assurance Information							
Volatiles 624	See Attached Report for Quality Assurance Information							

Quality Statement: ***All supporting quality control data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.***

\+ *Subcontract Work - NELAP Certified Lab*

These analytical results relate only to the sample tested.
All data is reported on an "As Is" basis unless designated as "Dry Wt."
RL = Reporting Limits

QC Data Reported in %, Except BOD in mg/L

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FAX # 210-658-7903

POLLUTION CONTROL SERVICES

Chain of Custody Number
5 4 8 6 9 4

MULTIPLE SAMPLE ANALYSIS REQUEST AND CHAIN OF CUSTODY FORM

Stamp 1st sample and COC as same number

CUSTOMER INFORMATION	REPORT INFORMATION		
Name: San Antonio River Authority	Attention: Russell Neal	Phone: (210) ~~844-0201~~ 689-4646	Fax: (210) 661-9324

SAMPLE INFORMATION

Project Information: Salatrillo - TCEQ Major Permit Renewal

Report "Soils" ☐ As Is ☐ Dry Wt.

Collected By:

Instructions/Comments: *Al, Ba, Be, Cd, Cr, Cu, Ni, Zn, SbMS, AsMS, PbMS, SeMS, AgMS, TlMS

Client / Field Sample ID	Collected Date	Collected Time	Field Chlorine Residual mg/L	Composite or Grab	Matrix (DW-Drinking Water; NPW-Non-potable water; WW-Wastewater; LW-Liquid Waste)	Container Type	Container Number	Preservative	CBOD, TSS, TDS, SO4, Cl, SpCond, HexCr, TriCr, NO3N, Talk, F,	NH3N, TKN, TPO4P, Metals*	604.1 Hex, Herb 615, Pest 1657, 608, 617, 632, SVOC 625	FOG (HEM)	VOC 624	CN-A	Phenol (Dist)	Low Level Hg	PCS Sample Number
Effluent	Start: 4/3/19 End: 4/4/19	Start: 9:00 AM End: 7:00 AM		☒C ☐G	☐DW ☒NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☑P ☑G ☐O	10	☑H2SO4 ☑HNO3 ☐H3PO4 ☐NaOH ☑ICE ☐	X	X	X						548694 ☒S ☐B ☒N ☐HEM Other:
Effluent	Start: 4/4/19 End: 4/4/19	Start: 9:30 AM End:		☐C ☒G	☐DW ☒NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O	10	☑H2SO4 ☐HNO3 ☐H3PO4 ☑NaOH ☐ICE ☐				X	X	X	X	X	548695 ☒S ☐B ☐N ☒HEM Other: -NaOH
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H2SO4 ☐HNO3 ☐H3PO4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H2SO4 ☐HNO3 ☐H3PO4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H2SO4 ☐HNO3 ☐H3PO4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H2SO4 ☐HNO3 ☐H3PO4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H2SO4 ☐HNO3 ☐H3PO4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H2SO4 ☐HNO3 ☐H3PO4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:

Required Turnaround: ☐ Routine (6-10 days) *EXPEDITE:* (See Surcharge Schedule) ☐ <8 Hrs. ☐ <16 Hrs. ☐ <24 Hrs. ☐ 5 days ☐ Other: ______ *Rush Charges Authorized by:*

Sample Archive/Disposal: ☐ Laboratory Standard ☐ Hold for client pick up — Container Type: P = Plastic, G = Glass, O = Other — Carrier ID:

Relinquished By:	Russell Neal	Date: 4/4/19	Time: 9:45 AM	Received By:	Stephen Glowersatt	Date: 4/4/2019	Time: 9:45 am
Relinquished By:	Stephen Glowersatt	Date: 4/4/19	Time: 10:03	Received By:	[illegible signature]	Date: 4/4/19	Time: 1003

Rev. Multiple Sample COC_20180628

1532 Universal City Blvd., Ste. 100, Universal City, Texas 78148
P (210) 340-0343 or (800) 880-4616 - F (210) 658-7903

Z:\COC\F\Fredericksburg_City_of\FredericksburgTCEQPermit

Login at www.pcslab.net

Pace Analytical Services, LLC
400 West Bethany Drive - Suite 190
Allen, TX 75013
(972)727-1123

April 18, 2019

Chuck Wallgren
Pollution Control Services
1532 Universal City Blvd. #100
Universal City, TX 78148

RE: Project: 548694
Pace Project No.: 75106031

Dear Chuck Wallgren:
Enclosed are the analytical results for sample(s) received by the laboratory on April 05, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Melissa McCullough

Melissa McCullough
melissa.mccullough@pacelabs.com
(972)727-1123
Project Manager

Enclosures

cc: Michael Klang

Pace Analytical Services, LLC
400 West Bethany Drive - Suite 190
Allen, TX 75013
(972)727-1123

CERTIFICATIONS

Project: 548694
Pace Project No.: 75106031

Dallas Certification IDs:

400 West Bethany Dr Suite 190, Allen, TX 75013
Florida Certification #: E871118
EPA# TX00074
Texas T104704232-18-26
Texas Certification #: T104704232-18-26
Kansas Certification #: E-10388
Arkansas Certification #: 88-0647
Oklahoma Certification #: 8727
Louisiana Certification #: 30686
Iowa Certification #: 408

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
400 West Bethany Drive - Suite 190
Allen, TX 75013
(972)727-1123

SAMPLE SUMMARY

Project: 548694
Pace Project No.: 75106031

Lab ID	Sample ID	Matrix	Date Collected	Date Received
75106031001	548694	Water	04/04/19 07:00	04/05/19 10:45
75106031002	548695	Water	04/04/19 09:30	04/05/19 10:45

Pace Analytical Services, LLC
400 West Bethany Drive - Suite 190
Allen, TX 75013
(972)727-1123

SAMPLE ANALYTE COUNT

Project: 548694
Pace Project No.: 75106031

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
75106031001	548694	EPA 608	JL	28	PASI-D
		EPA 615	DAT	3	PASI-D
		EPA 604.1	XLY	2	PASI-D
		EPA 632	XLY	3	PASI-D
		EPA 625	XLY	69	PASI-D
75106031002	548695	EPA 624 Low	ZST	37	PASI-D
		SM 4500-CN-E	SRT	1	PASI-D
		SM 4500-CN-G	SRT	1	PASI-D

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www.pacelabs.com

Pace Analytical Services, LLC
400 West Bethany Drive - Suite 190
Allen, TX 75013
(972)727-1123

ANALYTICAL RESULTS

Project: 548694
Pace Project No.: 75106031

Sample: 548694 **Lab ID: 75106031001** Collected: 04/04/19 07:00 Received: 04/05/19 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
608SF GCS Pesticides and PCBs	Analytical Method: EPA 608 Preparation Method: EPA 608 SF								
Aldrin	ND	ug/L	0.010	0.0070	1	04/10/19 19:55	04/12/19 12:47	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.0060	1	04/10/19 19:55	04/12/19 12:47	319-84-6	
beta-BHC	ND	ug/L	0.050	0.011	1	04/10/19 19:55	04/12/19 12:47	319-85-7	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.0050	1	04/10/19 19:55	04/12/19 12:47	58-89-9	
delta-BHC	ND	ug/L	0.050	0.0040	1	04/10/19 19:55	04/12/19 12:47	319-86-8	
Chlordane (Technical)	ND	ug/L	0.20	0.041	1	04/10/19 19:55	04/12/19 12:47	57-74-9	
4,4'-DDT	ND	ug/L	0.020	0.0050	1	04/10/19 19:55	04/12/19 12:47	50-29-3	
4,4'-DDE	ND	ug/L	0.10	0.0040	1	04/10/19 19:55	04/12/19 12:47	72-55-9	
4,4'-DDD	ND	ug/L	0.10	0.0060	1	04/10/19 19:55	04/12/19 12:47	72-54-8	
Dieldrin	ND	ug/L	0.020	0.0040	1	04/10/19 19:55	04/12/19 12:47	60-57-1	
Endosulfan I	ND	ug/L	0.010	0.0040	1	04/10/19 19:55	04/12/19 12:47	959-98-8	
Endosulfan II	ND	ug/L	0.020	0.0040	1	04/10/19 19:55	04/12/19 12:47	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.10	0.0040	1	04/10/19 19:55	04/12/19 12:47	1031-07-8	
Endrin	ND	ug/L	0.020	0.0040	1	04/10/19 19:55	04/12/19 12:47	72-20-8	
Endrin aldehyde	ND	ug/L	0.10	0.012	1	04/10/19 19:55	04/12/19 12:47	7421-93-4	
Heptachlor	ND	ug/L	0.010	0.0060	1	04/10/19 19:55	04/12/19 12:47	76-44-8	
Heptachlor epoxide	ND	ug/L	0.010	0.0040	1	04/10/19 19:55	04/12/19 12:47	1024-57-3	
Toxaphene	ND	ug/L	0.30	0.21	1	04/10/19 19:55	04/12/19 12:47	8001-35-2	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.20	0.11	1	04/10/19 19:55	04/12/19 12:47	53469-21-9	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.20	0.086	1	04/10/19 19:55	04/12/19 12:47	11097-69-1	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.20	0.13	1	04/10/19 19:55	04/12/19 12:47	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.20	0.18	1	04/10/19 19:55	04/12/19 12:47	11141-16-5	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.20	0.072	1	04/10/19 19:55	04/12/19 12:47	12672-29-6	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.20	0.14	1	04/10/19 19:55	04/12/19 12:47	11096-82-5	
PCB-1016 (Aroclor 1016)	ND	ug/L	0.20	0.12	1	04/10/19 19:55	04/12/19 12:47	12674-11-2	
PCB, Total	ND	ug/L	0.20	0.18	1	04/10/19 19:55	04/12/19 12:47	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	55	%.	47-135		1	04/10/19 19:55	04/12/19 12:47	877-09-8	
Decachlorobiphenyl (S)	83	%.	16-161		1	04/10/19 19:55	04/12/19 12:47	2051-24-3	
615 Chlorinated Herbicides	Analytical Method: EPA 615 Preparation Method: EPA 615								
2,4-D	ND	ug/L	0.70	0.18	1	04/09/19 22:30	04/15/19 16:10	94-75-7	
2,4,5-TP (Silvex)	ND	ug/L	0.30	0.16	1	04/09/19 22:30	04/15/19 16:10	93-72-1	
Surrogates									
2,4-DCAA (S)	51	%.	44-137		1	04/09/19 22:30	04/15/19 16:10	19719-28-9	
604.1 HPLC Hexachlorophene	Analytical Method: EPA 604.1 Preparation Method: EPA 604.1								
Hexachlorophene	ND	ug/L	10.0	3.2	1	04/09/19 14:05	04/11/19 06:02	70-30-4	N3
Surrogates									
Nitrobenzene (S)	53	%.	25-108		1	04/09/19 14:05	04/11/19 06:02		
632 HPLC Carbamates	Analytical Method: EPA 632 Preparation Method: EPA 632								
Carbaryl	ND	ug/L	4.0	0.61	1	04/09/19 14:05	04/11/19 06:02	63-25-2	
Diuron	ND	ug/L	0.080	0.020	1	04/09/19 14:05	04/11/19 06:02	330-54-1	N2
Surrogates									
Nitrobenzene (S)	53	%.	18-113		1	04/09/19 14:05	04/11/19 06:02		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
400 West Bethany Drive - Suite 190
Allen, TX 75013
(972)727-1123

ANALYTICAL RESULTS

Project: 548694
Pace Project No.: 75106031

Sample: 548694 Lab ID: 75106031001 Collected: 04/04/19 07:00 Received: 04/05/19 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625								
Nonylphenol	ND	ug/L	333	2.9	1	04/10/19 23:00	04/16/19 04:25	25154-52-3	N2
2-Chlorophenol	ND	ug/L	10.0	0.82	1	04/10/19 23:00	04/16/19 04:25	95-57-8	
2,4-Dichlorophenol	ND	ug/L	10.0	0.82	1	04/10/19 23:00	04/16/19 04:25	120-83-2	
Cresols (Total)	ND	ug/L	10.0	1.5	1	04/10/19 23:00	04/16/19 04:25	1319-77-3	N2
2,4-Dimethylphenol	ND	ug/L	10.0	1.4	1	04/10/19 23:00	04/16/19 04:25	105-67-9	
4,6-Dinitro-2-methylphenol	ND	ug/L	10.0	1.5	1	04/10/19 23:00	04/16/19 04:25	534-52-1	
2,4-Dinitrophenol	ND	ug/L	50.0	1.1	1	04/10/19 23:00	04/16/19 04:25	51-28-5	
2-Nitrophenol	ND	ug/L	20.0	1.7	1	04/10/19 23:00	04/16/19 04:25	88-75-5	
4-Nitrophenol	ND	ug/L	50.0	1.6	1	04/10/19 23:00	04/16/19 04:25	100-02-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	10.0	0.77	1	04/10/19 23:00	04/16/19 04:25		
4-Chloro-3-methylphenol	ND	ug/L	10.0	0.87	1	04/10/19 23:00	04/16/19 04:25	59-50-7	
Pentachlorophenol	ND	ug/L	5.0	2.1	1	04/10/19 23:00	04/16/19 04:25	87-86-5	
Phenol	ND	ug/L	10.0	0.97	1	04/10/19 23:00	04/16/19 04:25	108-95-2	
2,4,5-Trichlorophenol	ND	ug/L	50.0	1.9	1	04/10/19 23:00	04/16/19 04:25	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	10.0	1.8	1	04/10/19 23:00	04/16/19 04:25	88-06-2	
Acenaphthene	ND	ug/L	10.0	1.3	1	04/10/19 23:00	04/16/19 04:25	83-32-9	
Acenaphthylene	ND	ug/L	10.0	1.3	1	04/10/19 23:00	04/16/19 04:25	208-96-8	
Anthracene	ND	ug/L	10.0	1.1	1	04/10/19 23:00	04/16/19 04:25	120-12-7	
Benzidine	ND	ug/L	50.0	3.1	1	04/10/19 23:00	04/16/19 04:25	92-87-5	
Benzo(a)anthracene	ND	ug/L	5.0	0.93	1	04/10/19 23:00	04/16/19 04:25	56-55-3	
Benzo(a)pyrene	ND	ug/L	5.0	0.94	1	04/10/19 23:00	04/16/19 04:25	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	10.0	1.0	1	04/10/19 23:00	04/16/19 04:25	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	20.0	1.0	1	04/10/19 23:00	04/16/19 04:25	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	2.5	0.93	1	04/10/19 23:00	04/16/19 04:25	207-08-9	
bis(2-Chloroethoxy)methane	ND	ug/L	10.0	0.99	1	04/10/19 23:00	04/16/19 04:25	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	10.0	1.0	1	04/10/19 23:00	04/16/19 04:25	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	2.5	1.2	1	04/10/19 23:00	04/16/19 04:25	108-60-1	
bis(2-Ethylhexyl)phthalate	ND	ug/L	10.0	3.2	1	04/10/19 23:00	04/16/19 04:25	117-81-7	
4-Bromophenylphenyl ether	ND	ug/L	10.0	1.0	1	04/10/19 23:00	04/16/19 04:25	101-55-3	
Butylbenzylphthalate	ND	ug/L	10.0	1.4	1	04/10/19 23:00	04/16/19 04:25	85-68-7	
2-Chloronaphthalene	ND	ug/L	10.0	1.4	1	04/10/19 23:00	04/16/19 04:25	91-58-7	
4-Chlorophenylphenyl ether	ND	ug/L	10.0	1.4	1	04/10/19 23:00	04/16/19 04:25	7005-72-3	
Chrysene	ND	ug/L	5.0	1.0	1	04/10/19 23:00	04/16/19 04:25	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	5.0	1.1	1	04/10/19 23:00	04/16/19 04:25	53-70-3	
3,3'-Dichlorobenzidine	ND	ug/L	5.0	2.7	1	04/10/19 23:00	04/16/19 04:25	91-94-1	
Diethylphthalate	ND	ug/L	10.0	0.92	1	04/10/19 23:00	04/16/19 04:25	84-66-2	
Dimethylphthalate	ND	ug/L	10.0	0.88	1	04/10/19 23:00	04/16/19 04:25	131-11-3	
Di-n-butylphthalate	ND	ug/L	10.0	1.2	1	04/10/19 23:00	04/16/19 04:25	84-74-2	
2,4-Dinitrotoluene	ND	ug/L	10.0	2.7	1	04/10/19 23:00	04/16/19 04:25	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	10.0	1.8	1	04/10/19 23:00	04/16/19 04:25	606-20-2	
Di-n-octylphthalate	ND	ug/L	10.0	1.7	1	04/10/19 23:00	04/16/19 04:25	117-84-0	
1,2-Diphenylhydrazine	ND	ug/L	20.0	1.2	1	04/10/19 23:00	04/16/19 04:25	122-66-7	
Fluoranthene	ND	ug/L	10.0	1.1	1	04/10/19 23:00	04/16/19 04:25	206-44-0	
Fluorene	ND	ug/L	10.0	1.3	1	04/10/19 23:00	04/16/19 04:25	86-73-7	
Hexachlorobenzene	ND	ug/L	5.0	0.97	1	04/10/19 23:00	04/16/19 04:25	118-74-1	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1.8	1	04/10/19 23:00	04/16/19 04:25	87-68-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
400 West Bethany Drive - Suite 190
Allen, TX 75013
(972)727-1123

ANALYTICAL RESULTS

Project: 548694
Pace Project No.: 75106031

Sample: 548694 **Lab ID: 75106031001** Collected: 04/04/19 07:00 Received: 04/05/19 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625								
Hexachlorocyclopentadiene	ND	ug/L	10.0	1.2	1	04/10/19 23:00	04/16/19 04:25	77-47-4	
Hexachloroethane	ND	ug/L	20.0	1.9	1	04/10/19 23:00	04/16/19 04:25	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	5.0	0.98	1	04/10/19 23:00	04/16/19 04:25	193-39-5	
Isophorone	ND	ug/L	10.0	1.8	1	04/10/19 23:00	04/16/19 04:25	78-59-1	
Naphthalene	ND	ug/L	10.0	2.0	1	04/10/19 23:00	04/16/19 04:25	91-20-3	
Nitrobenzene	ND	ug/L	10.0	1.2	1	04/10/19 23:00	04/16/19 04:25	98-95-3	
N-Nitrosodiethylamine	ND	ug/L	20.0	0.93	1	04/10/19 23:00	04/16/19 04:25	55-18-5	
N-Nitrosodimethylamine	ND	ug/L	50.0	0.65	1	04/10/19 23:00	04/16/19 04:25	62-75-9	
N-Nitroso-di-n-butylamine	ND	ug/L	20.0	0.74	1	04/10/19 23:00	04/16/19 04:25	924-16-3	
N-Nitroso-di-n-propylamine	ND	ug/L	20.0	1.1	1	04/10/19 23:00	04/16/19 04:25	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	20.0	0.83	1	04/10/19 23:00	04/16/19 04:25	86-30-6	
Phenanthrene	ND	ug/L	10.0	1.1	1	04/10/19 23:00	04/16/19 04:25	85-01-8	
Pentachlorobenzene	ND	ug/L	20.0	1.3	1	04/10/19 23:00	04/16/19 04:25	608-93-5	
Pyrene	ND	ug/L	10.0	1.2	1	04/10/19 23:00	04/16/19 04:25	129-00-0	
Pyridine	ND	ug/L	20.0	1.2	1	04/10/19 23:00	04/16/19 04:25	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	1.6	1	04/10/19 23:00	04/16/19 04:25	120-82-1	
1,2,4,5-Tetrachlorobenzene	ND	ug/L	20.0	1.3	1	04/10/19 23:00	04/16/19 04:25	95-94-3	
Surrogates									
Nitrobenzene-d5 (S)	43	%	15-106		1	04/10/19 23:00	04/16/19 04:25	4165-60-0	
2-Fluorobiphenyl (S)	45	%	26-102		1	04/10/19 23:00	04/16/19 04:25	321-60-8	
p-Terphenyl-d14 (S)	86	%	10-120		1	04/10/19 23:00	04/16/19 04:25	1718-51-0	
Phenol-d6 (S)	17	%	10-54		1	04/10/19 23:00	04/16/19 04:25	13127-88-3	
2-Fluorophenol (S)	24	%	10-66		1	04/10/19 23:00	04/16/19 04:25	367-12-4	
2,4,6-Tribromophenol (S)	70	%	29-132		1	04/10/19 23:00	04/16/19 04:25	118-79-6	

Pace Analytical Services, LLC
400 West Bethany Drive - Suite 190
Allen, TX 75013
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ANALYTICAL RESULTS

Project: 548694
Pace Project No.: 75106031

Sample: 548695 **Lab ID: 75106031002** Collected: 04/04/19 09:30 Received: 04/05/19 10:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low								
Acrolein	ND	ug/L	50.0	7.9	1		04/05/19 21:11	107-02-8	
Acrylonitrile	ND	ug/L	50.0	6.0	1		04/05/19 21:11	107-13-1	
Benzene	ND	ug/L	10.0	0.49	1		04/05/19 21:11	71-43-2	
Bromoform	ND	ug/L	10.0	7.5	1		04/05/19 21:11	75-25-2	
Carbon tetrachloride	ND	ug/L	2.0	1.1	1		04/05/19 21:11	56-23-5	
Chlorobenzene	ND	ug/L	10.0	0.37	1		04/05/19 21:11	108-90-7	
Dibromochloromethane	ND	ug/L	10.0	0.40	1		04/05/19 21:11	124-48-1	
Chloroethane	ND	ug/L	50.0	0.95	1		04/05/19 21:11	75-00-3	
2-Chloroethylvinyl ether	ND	ug/L	10.0	3.2	1		04/05/19 21:11	110-75-8	
Chloroform	ND	ug/L	10.0	1.2	1		04/05/19 21:11	67-66-3	
Bromodichloromethane	ND	ug/L	10.0	0.50	1		04/05/19 21:11	75-27-4	
1,1-Dichloroethane	ND	ug/L	5.0	1.2	1		04/05/19 21:11	75-34-3	
1,4-Dichlorobenzene	ND	ug/L	10.0	0.40	1		04/05/19 21:11	106-46-7	
1,3-Dichlorobenzene	ND	ug/L	10.0	0.43	1		04/05/19 21:11	541-73-1	
1,2-Dichlorobenzene	ND	ug/L	10.0	0.37	1		04/05/19 21:11	95-50-1	
1,2-Dibromoethane (EDB)	ND	ug/L	10.0	0.45	1		04/05/19 21:11	106-93-4	
1,2-Dichloroethane	ND	ug/L	10.0	1.1	1		04/05/19 21:11	107-06-2	
1,1-Dichloroethene	ND	ug/L	10.0	1.1	1		04/05/19 21:11	75-35-4	
1,2-Dichloropropane	ND	ug/L	10.0	0.49	1		04/05/19 21:11	78-87-5	
Total 1,3-Dichloropropene	ND	ug/L	10.0	3.7	1		04/05/19 21:11	542-75-6	N2
Ethylbenzene	ND	ug/L	10.0	0.46	1		04/05/19 21:11	100-41-4	
Bromomethane	ND	ug/L	50.0	1.2	1		04/05/19 21:11	74-83-9	
Chloromethane	ND	ug/L	50.0	1.1	1		04/05/19 21:11	74-87-3	
2-Butanone (MEK)	ND	ug/L	50.0	4.9	1		04/05/19 21:11	78-93-3	
Methylene Chloride	ND	ug/L	20.0	10.0	1		04/05/19 21:11	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	1.5	1		04/05/19 21:11	79-34-5	
Tetrachloroethene	ND	ug/L	10.0	1.5	1		04/05/19 21:11	127-18-4	
Toluene	ND	ug/L	10.0	1.3	1		04/05/19 21:11	108-88-3	
trans-1,2-Dichloroethene	ND	ug/L	10.0	1.2	1		04/05/19 21:11	156-60-5	
1,1,1-Trichloroethane	ND	ug/L	10.0	0.69	1		04/05/19 21:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	10.0	1.3	1		04/05/19 21:11	79-00-5	
Trichloroethene	ND	ug/L	10.0	0.60	1		04/05/19 21:11	79-01-6	
Vinyl chloride	ND	ug/L	10.0	0.93	1		04/05/19 21:11	75-01-4	
Total Trihalomethanes (Calc.)	ND	ug/L	10.0	3.4	1		04/05/19 21:11		
Surrogates									
4-Bromofluorobenzene (S)	103	%.	70-130		1		04/05/19 21:11	460-00-4	
Toluene-d8 (S)	99	%.	70-130		1		04/05/19 21:11	2037-26-5	
1,2-Dichloroethane-d4 (S)	108	%.	70-130		1		04/05/19 21:11	17060-07-0	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E Preparation Method: SM 4500-CN-C								
Cyanide	ND	ug/L	10.0	4.0	1	04/15/19 14:37	04/15/19 16:14	57-12-5	
4500CNG Cyanide, Amenable	Analytical Method: SM 4500-CN-G Preparation Method: SM 4500-CN-C								
Amenable Cyanide	ND	ug/L	10.0	4.0	1	04/16/19 12:07	04/16/19 12:08	57-12-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
400 West Bethany Drive - Suite 190
Allen, TX 75013
(972)727-1123

QUALITY CONTROL DATA

Project: 548694
Pace Project No.: 75106031

QC Batch: 115296
QC Batch Method: EPA 624 Low
Associated Lab Samples: 75106031002

Analysis Method: EPA 624 Low
Analysis Description: 624 MSV

METHOD BLANK: 519249
Associated Lab Samples: 75106031002

Matrix: Water

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	10.0	0.69	04/05/19 10:52	
1,1,2,2-Tetrachloroethane	ug/L	ND	10.0	1.5	04/05/19 10:52	
1,1,2-Trichloroethane	ug/L	ND	10.0	1.3	04/05/19 10:52	
1,1-Dichloroethane	ug/L	ND	5.0	1.2	04/05/19 10:52	
1,1-Dichloroethene	ug/L	ND	10.0	1.1	04/05/19 10:52	
1,2-Dibromoethane (EDB)	ug/L	ND	10.0	0.45	04/05/19 10:52	
1,2-Dichlorobenzene	ug/L	ND	10.0	0.37	04/05/19 10:52	
1,2-Dichloroethane	ug/L	ND	10.0	1.1	04/05/19 10:52	
1,2-Dichloropropane	ug/L	ND	10.0	0.49	04/05/19 10:52	
1,3-Dichlorobenzene	ug/L	ND	10.0	0.43	04/05/19 10:52	
1,4-Dichlorobenzene	ug/L	ND	10.0	0.40	04/05/19 10:52	
2-Butanone (MEK)	ug/L	ND	50.0	4.9	04/05/19 10:52	
2-Chloroethylvinyl ether	ug/L	ND	10.0	3.2	04/05/19 10:52	
Acrolein	ug/L	ND	50.0	7.9	04/05/19 10:52	
Acrylonitrile	ug/L	ND	50.0	6.0	04/05/19 10:52	
Benzene	ug/L	ND	10.0	0.49	04/05/19 10:52	
Bromodichloromethane	ug/L	ND	10.0	0.50	04/05/19 10:52	
Bromoform	ug/L	ND	10.0	7.5	04/05/19 10:52	
Bromomethane	ug/L	ND	50.0	1.2	04/05/19 10:52	
Carbon tetrachloride	ug/L	ND	2.0	1.1	04/05/19 10:52	
Chlorobenzene	ug/L	ND	10.0	0.37	04/05/19 10:52	
Chloroethane	ug/L	ND	50.0	0.95	04/05/19 10:52	
Chloroform	ug/L	ND	10.0	1.2	04/05/19 10:52	
Chloromethane	ug/L	ND	50.0	1.1	04/05/19 10:52	
Dibromochloromethane	ug/L	ND	10.0	0.40	04/05/19 10:52	
Ethylbenzene	ug/L	ND	10.0	0.46	04/05/19 10:52	
Methylene Chloride	ug/L	ND	20.0	10.0	04/05/19 10:52	
Tetrachloroethene	ug/L	ND	10.0	1.5	04/05/19 10:52	
Toluene	ug/L	ND	10.0	1.3	04/05/19 10:52	
Total 1,3-Dichloropropene	ug/L	ND	10.0	3.7	04/05/19 10:52	N2
Total Trihalomethanes (Calc.)	ug/L	ND	10.0	3.4	04/05/19 10:52	
trans-1,2-Dichloroethene	ug/L	ND	10.0	1.2	04/05/19 10:52	
Trichloroethene	ug/L	ND	10.0	0.60	04/05/19 10:52	
Vinyl chloride	ug/L	ND	10.0	0.93	04/05/19 10:52	
1,2-Dichloroethane-d4 (S)	%.	107	70-130		04/05/19 10:52	
4-Bromofluorobenzene (S)	%.	102	70-130		04/05/19 10:52	
Toluene-d8 (S)	%.	98	70-130		04/05/19 10:52	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
400 West Bethany Drive - Suite 190
Allen, TX 75013
(972)727-1123

QUALITY CONTROL DATA

Project: 548694
Pace Project No.: 75106031

LABORATORY CONTROL SAMPLE: 519250

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	19.9	22.3	112	52-162	
1,1,2,2-Tetrachloroethane	ug/L	20.1	18.0	89	46-157	
1,1,2-Trichloroethane	ug/L	19.9	18.7	94	52-150	
1,1-Dichloroethane	ug/L	20	20.9	105	59-155	
1,1-Dichloroethene	ug/L	19.8	22.9	116	1-234	
1,2-Dibromoethane (EDB)	ug/L	20	18.2	91	81-118	
1,2-Dichlorobenzene	ug/L	20	20.0	100	18-190	
1,2-Dichloroethane	ug/L	19.9	18.9	95	49-155	
1,2-Dichloropropane	ug/L	19.9	21.4	108	76-124	
1,3-Dichlorobenzene	ug/L	19.9	21.1	106	59-156	
1,4-Dichlorobenzene	ug/L	20	20.9	104	18-190	
2-Butanone (MEK)	ug/L	100	72.5	72	60-130	
2-Chloroethylvinyl ether	ug/L	20.1	15.9	79	1-305	
Acrolein	ug/L	200	133	66	49-138	
Acrylonitrile	ug/L	199	175	88	57-137	
Benzene	ug/L	20	21.9	109	37-151	
Bromodichloromethane	ug/L	19.9	20.2	101	35-155	
Bromoform	ug/L	19.8	18.7	95	45-169	
Bromomethane	ug/L	20	22.1J	111	1-242	
Carbon tetrachloride	ug/L	19.8	22.5	113	70-140	
Chlorobenzene	ug/L	19.8	20.6	104	37-160	
Chloroethane	ug/L	20.1	21.8J	108	14-230	
Chloroform	ug/L	19.8	20.2	102	51-138	
Chloromethane	ug/L	19.9	21.6J	109	1-273	
Dibromochloromethane	ug/L	19.8	18.6	94	53-149	
Ethylbenzene	ug/L	20.1	22.0	110	37-162	
Methylene Chloride	ug/L	20.4	19.8J	97	1-221	
Tetrachloroethene	ug/L	19.9	20.9	105	64-148	
Toluene	ug/L	20	21.7	108	47-150	
Total 1,3-Dichloropropene	ug/L	40.1	38.6	96	70-130	N2
Total Trihalomethanes (Calc.)	ug/L		77.6			
trans-1,2-Dichloroethene	ug/L	20	21.8	109	54-156	
Trichloroethene	ug/L	20	21.5	108	71-157	
Vinyl chloride	ug/L	20	21.8	109	1-251	
1,2-Dichloroethane-d4 (S)	%.			96	70-130	
4-Bromofluorobenzene (S)	%.			106	70-130	
Toluene-d8 (S)	%.			102	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 519251 519252

Parameter	Units	75105985001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	1990	1990	1080	1060	54	53	52-162	2	20	
1,1,2,2-Tetrachloroethane	ug/L	ND	2010	2010	2350	2350	117	117	46-157	0	20	
1,1,2-Trichloroethane	ug/L	ND	1990	1990	2230	2220	112	112	52-150	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
400 West Bethany Drive - Suite 190
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QUALITY CONTROL DATA

Project: 548694
Pace Project No.: 75106031

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 519251 519252

Parameter	Units	75105985001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethane	ug/L	ND	2000	2000	617	604	31	30	59-155	2	20	M1
1,1-Dichloroethene	ug/L	ND	1980	1980	393	391	20	20	1-234		20	
1,2-Dibromoethane (EDB)	ug/L	ND	2000	2000	2180	2130	109	106	77-122	3	20	
1,2-Dichlorobenzene	ug/L	ND	2000	2000	2310	2330	116	117	18-190	1	20	
1,2-Dichloroethane	ug/L	ND	1990	1990	1490	1470	75	74	49-155	2	20	
1,2-Dichloropropane	ug/L	ND	1990	1990	1750	1730	88	87	1-210	1	20	
1,3-Dichlorobenzene	ug/L	ND	1990	1990	2270	2290	114	115	59-156	1	20	
1,4-Dichlorobenzene	ug/L	ND	2000	2000	2310	2300	115	115	18-190	0	20	
2-Butanone (MEK)	ug/L	ND	10000	10000	9870	10300	99	103	62-131	4	20	
2-Chloroethylvinyl ether	ug/L	ND	2010	2010	1840	1840	92	91	40-140	0	20	
Acrolein	ug/L	ND	20000	20000	ND	ND	0	0	10-140		20	M1
Acrylonitrile	ug/L	ND	19900	19900	16100	15800	81	79	10-140	2	20	
Benzene	ug/L	ND	2000	2000	1010	990	48	47	37-151	2	20	
Bromodichloromethane	ug/L	ND	1990	1990	1960	1980	98	99	35-155	1	20	
Bromoform	ug/L	ND	1980	1980	2120	2130	107	108	45-169	1	20	
Bromomethane	ug/L	ND	2000	2000	510	626	25	31	1-242	20	20	
Carbon tetrachloride	ug/L	ND	1980	1980	934	930	47	47	70-140	1	20	M1
Chlorobenzene	ug/L	ND	1980	1980	2160	2160	109	109	37-160	0	20	
Chloroethane	ug/L	ND	2010	2010	2660	2520	132	125	14-230	6	20	
Chloroform	ug/L	ND	1980	1980	1490	1470	75	74	51-138	1	20	
Chloromethane	ug/L	ND	1990	1990	2060	1990	104	100	10-273	3	20	
Dibromochloromethane	ug/L	ND	1980	1980	2070	2130	105	108	53-149	3	20	
Ethylbenzene	ug/L	ND	2010	2010	2320	2270	115	113	37-162	2	20	
Methylene Chloride	ug/L	ND	2040	2040	673	663	19	19	1-221		20	
Tetrachloroethene	ug/L	ND	1990	1990	1860	1810	93	91	64-148	3	20	
Toluene	ug/L	ND	2000	2000	1840	1810	92	90	47-150	2	20	
Total 1,3-Dichloropropene	ug/L	ND	4010	4010	3760	3760	94	94	70-130	0	20	N2
Total Trihalomethanes (Calc.)	ug/L	ND			7640	7710				1	20	
trans-1,2-Dichloroethene	ug/L	ND	2000	2000	274	267	14	13	54-156		20	M1
Trichloroethene	ug/L	ND	2000	2000	1490	1430	74	72	71-157	4	20	
Vinyl chloride	ug/L	ND	2000	2000	2200	2120	110	106	1-251	4	20	
1,2-Dichloroethane-d4 (S)	%						105	105	70-130			
4-Bromofluorobenzene (S)	%						102	103	70-130			
Toluene-d8 (S)	%						102	102	70-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 548694
Pace Project No.: 75106031

QC Batch: 115494
QC Batch Method: EPA 604.1
Analysis Method: EPA 604.1
Analysis Description: 604.1 HPLC Hexachlorophene
Associated Lab Samples: 75106031001

METHOD BLANK: 520111 Matrix: Water
Associated Lab Samples: 75106031001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Hexachlorophene	ug/L	ND	10.0	3.2	04/11/19 00:15	N3
Nitrobenzene (S)	%.	73	25-108		04/11/19 00:15	

LABORATORY CONTROL SAMPLE: 520112

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hexachlorophene	ug/L	50	30.3	61	28-123	N3
Nitrobenzene (S)	%.			76	25-108	

MATRIX SPIKE SAMPLE: 520118

Parameter	Units	75105824010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Hexachlorophene	ug/L	ND	50	33.3	67	22-130	N3
Nitrobenzene (S)	%.				70	25-108	

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QUALITY CONTROL DATA

Project: 548694
Pace Project No.: 75106031

QC Batch: 115635 Analysis Method: EPA 608
QC Batch Method: EPA 608 SF Analysis Description: 608 GCS Pest PCB
Associated Lab Samples: 75106031001

METHOD BLANK: 520764 Matrix: Water
Associated Lab Samples: 75106031001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
4,4'-DDD	ug/L	ND	0.10	0.0060	04/12/19 11:06	
4,4'-DDE	ug/L	ND	0.10	0.0040	04/12/19 11:06	
4,4'-DDT	ug/L	ND	0.020	0.0050	04/12/19 11:06	
Aldrin	ug/L	ND	0.010	0.0070	04/12/19 11:06	
alpha-BHC	ug/L	ND	0.050	0.0060	04/12/19 11:06	
beta-BHC	ug/L	ND	0.050	0.011	04/12/19 11:06	
Chlordane (Technical)	ug/L	ND	0.20	0.041	04/12/19 11:06	
delta-BHC	ug/L	ND	0.050	0.0040	04/12/19 11:06	
Dieldrin	ug/L	ND	0.020	0.0040	04/12/19 11:06	
Endosulfan I	ug/L	ND	0.010	0.0040	04/12/19 11:06	
Endosulfan II	ug/L	ND	0.020	0.0040	04/12/19 11:06	
Endosulfan sulfate	ug/L	ND	0.10	0.0040	04/12/19 11:06	
Endrin	ug/L	ND	0.020	0.0040	04/12/19 11:06	
Endrin aldehyde	ug/L	ND	0.10	0.012	04/12/19 11:06	
gamma-BHC (Lindane)	ug/L	ND	0.050	0.0050	04/12/19 11:06	
Heptachlor	ug/L	ND	0.010	0.0060	04/12/19 11:06	
Heptachlor epoxide	ug/L	ND	0.010	0.0040	04/12/19 11:06	
PCB-1016 (Aroclor 1016)	ug/L	ND	0.20	0.12	04/12/19 11:06	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.20	0.13	04/12/19 11:06	
PCB-1232 (Aroclor 1232)	ug/L	ND	0.20	0.18	04/12/19 11:06	
PCB-1242 (Aroclor 1242)	ug/L	ND	0.20	0.11	04/12/19 11:06	
PCB-1248 (Aroclor 1248)	ug/L	ND	0.20	0.072	04/12/19 11:06	
PCB-1254 (Aroclor 1254)	ug/L	ND	0.20	0.086	04/12/19 11:06	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.20	0.14	04/12/19 11:06	
Toxaphene	ug/L	ND	0.30	0.21	04/12/19 11:06	
Decachlorobiphenyl (S)	%.	73	16-161		04/12/19 11:06	
Tetrachloro-m-xylene (S)	%.	73	47-135		04/12/19 11:06	

LABORATORY CONTROL SAMPLE: 520765

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/L	0.5	0.54	108	31-141	
4,4'-DDE	ug/L	0.5	0.53	106	30-145	
4,4'-DDT	ug/L	0.5	0.55	111	10-160	
Aldrin	ug/L	0.5	0.45	89	42-142	
alpha-BHC	ug/L	0.5	0.51	103	37-134	
beta-BHC	ug/L	0.5	0.49	98	17-147	
delta-BHC	ug/L	0.5	0.39	79	19-140	
Dieldrin	ug/L	0.5	0.52	104	36-146	
Endosulfan I	ug/L	0.5	0.49	99	45-153	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 548694
Pace Project No.: 75106031

LABORATORY CONTROL SAMPLE: 520765

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Endosulfan II	ug/L	0.5	0.52	103	40-140	
Endosulfan sulfate	ug/L	0.5	0.50	99	26-144	
Endrin	ug/L	0.5	0.53	105	30-147	
Endrin aldehyde	ug/L	0.5	0.48	97	40-140	
gamma-BHC (Lindane)	ug/L	0.5	0.52	104	32-127	
Heptachlor	ug/L	0.5	0.46	92	34-141	
Heptachlor epoxide	ug/L	0.5	0.48	96	25-142	
Decachlorobiphenyl (S)	%.			80	16-161	
Tetrachloro-m-xylene (S)	%.			86	47-135	

MATRIX SPIKE SAMPLE: 520766

Parameter	Units	75105855003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/L	ND	0.5	0.54	108	24-177	
4,4'-DDE	ug/L	ND	0.5	0.51	103	22-161	
4,4'-DDT	ug/L	ND	0.5	0.56	113	10-180	
Aldrin	ug/L	ND	0.5	0.43	87	10-156	
alpha-BHC	ug/L	ND	0.5	0.51	101	71-143	
beta-BHC	ug/L	ND	0.5	0.48	96	72-149	
delta-BHC	ug/L	ND	0.5	0.40	80	44-151	
Dieldrin	ug/L	ND	0.5	0.51	102	33-166	
Endosulfan I	ug/L	ND	0.5	0.49	98	27-167	
Endosulfan II	ug/L	ND	0.5	0.51	102	37-173	
Endosulfan sulfate	ug/L	ND	0.5	0.50	101	33-167	
Endrin	ug/L	ND	0.5	0.53	106	39-173	
Endrin aldehyde	ug/L	ND	0.5	0.49	98	14-180	
gamma-BHC (Lindane)	ug/L	ND	0.5	0.52	103	69-139	
Heptachlor	ug/L	ND	0.5	0.44	89	48-141	
Heptachlor epoxide	ug/L	ND	0.5	0.47	94	28-164	
Decachlorobiphenyl (S)	%.				82	16-161	
Tetrachloro-m-xylene (S)	%.				77	47-135	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 548694
Pace Project No.: 75106031

QC Batch: 115532
QC Batch Method: EPA 615
Associated Lab Samples: 75106031001

Analysis Method: EPA 615
Analysis Description: 615 GCS Herbicides

METHOD BLANK: 520324
Associated Lab Samples: 75106031001

Matrix: Water

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
2,4,5-TP (Silvex)	ug/L	ND	0.30	0.15	04/15/19 11:32	
2,4-D	ug/L	ND	0.70	0.17	04/15/19 11:32	
2,4-DCAA (S)	%	45	44-137		04/15/19 11:32	

LABORATORY CONTROL SAMPLE: 520325

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,5-TP (Silvex)	ug/L	3	2.6	85	57-125	
2,4-D	ug/L	3	2.5	83	49-133	
2,4-DCAA (S)	%			53	44-137	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 520326 520327

Parameter	Units	75106015001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
2,4,5-TP (Silvex)	ug/L	ND	3.1	3.1	2.8	2.7	90	89	44-134	2	40	
2,4-D	ug/L	ND	3.1	3.1	2.6	2.4	85	80	49-145	7	40	
2,4-DCAA (S)	%						60	56	44-137			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 548694
Pace Project No.: 75106031

QC Batch: 115639 Analysis Method: EPA 625
QC Batch Method: EPA 625 Analysis Description: 625 MSS
Associated Lab Samples: 75106031001

METHOD BLANK: 520771 Matrix: Water
Associated Lab Samples: 75106031001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	ND	20.0	1.3	04/15/19 20:57	
1,2,4-Trichlorobenzene	ug/L	ND	10.0	1.6	04/15/19 20:57	
1,2-Diphenylhydrazine	ug/L	ND	20.0	1.2	04/15/19 20:57	
2,4,5-Trichlorophenol	ug/L	ND	50.0	1.9	04/15/19 20:57	
2,4,6-Trichlorophenol	ug/L	ND	10.0	1.8	04/15/19 20:57	
2,4-Dichlorophenol	ug/L	ND	10.0	0.82	04/15/19 20:57	
2,4-Dimethylphenol	ug/L	ND	10.0	1.4	04/15/19 20:57	
2,4-Dinitrophenol	ug/L	ND	50.0	1.1	04/15/19 20:57	
2,4-Dinitrotoluene	ug/L	ND	10.0	2.7	04/15/19 20:57	
2,6-Dinitrotoluene	ug/L	ND	10.0	1.8	04/15/19 20:57	
2-Chloronaphthalene	ug/L	ND	10.0	1.4	04/15/19 20:57	
2-Chlorophenol	ug/L	ND	10.0	0.82	04/15/19 20:57	
2-Nitrophenol	ug/L	ND	20.0	1.7	04/15/19 20:57	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	10.0	0.77	04/15/19 20:57	
3,3'-Dichlorobenzidine	ug/L	ND	5.0	2.7	04/15/19 20:57	
4,6-Dinitro-2-methylphenol	ug/L	ND	10.0	1.5	04/15/19 20:57	
4-Bromophenylphenyl ether	ug/L	ND	10.0	1.0	04/15/19 20:57	
4-Chloro-3-methylphenol	ug/L	ND	10.0	0.87	04/15/19 20:57	
4-Chlorophenylphenyl ether	ug/L	ND	10.0	1.4	04/15/19 20:57	
4-Nitrophenol	ug/L	ND	50.0	1.6	04/15/19 20:57	
Acenaphthene	ug/L	ND	10.0	1.3	04/15/19 20:57	
Acenaphthylene	ug/L	ND	10.0	1.3	04/15/19 20:57	
Anthracene	ug/L	ND	10.0	1.1	04/15/19 20:57	
Benzidine	ug/L	ND	50.0	3.1	04/15/19 20:57	
Benzo(a)anthracene	ug/L	ND	5.0	0.93	04/15/19 20:57	
Benzo(a)pyrene	ug/L	ND	5.0	0.94	04/15/19 20:57	
Benzo(b)fluoranthene	ug/L	ND	10.0	1.0	04/15/19 20:57	
Benzo(g,h,i)perylene	ug/L	ND	20.0	1.0	04/15/19 20:57	
Benzo(k)fluoranthene	ug/L	ND	2.5	0.93	04/15/19 20:57	
bis(2-Chloroethoxy)methane	ug/L	ND	10.0	0.99	04/15/19 20:57	
bis(2-Chloroethyl) ether	ug/L	ND	10.0	1.0	04/15/19 20:57	
bis(2-Chloroisopropyl) ether	ug/L	ND	2.5	1.2	04/15/19 20:57	
bis(2-Ethylhexyl)phthalate	ug/L	ND	10.0	3.2	04/15/19 20:57	
Butylbenzylphthalate	ug/L	ND	10.0	1.4	04/15/19 20:57	
Chrysene	ug/L	ND	5.0	1.0	04/15/19 20:57	
Cresols (Total)	ug/L	ND	10.0	1.5	04/15/19 20:57	N2
Di-n-butylphthalate	ug/L	ND	10.0	1.2	04/15/19 20:57	
Di-n-octylphthalate	ug/L	ND	10.0	1.7	04/15/19 20:57	
Dibenz(a,h)anthracene	ug/L	ND	5.0	1.1	04/15/19 20:57	
Diethylphthalate	ug/L	ND	10.0	0.92	04/15/19 20:57	
Dimethylphthalate	ug/L	ND	10.0	0.88	04/15/19 20:57	

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QUALITY CONTROL DATA

Project: 548694
Pace Project No.: 75106031

METHOD BLANK: 520771 Matrix: Water
Associated Lab Samples: 75106031001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoranthene	ug/L	ND	10.0	1.1	04/15/19 20:57	
Fluorene	ug/L	ND	10.0	1.3	04/15/19 20:57	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	1.8	04/15/19 20:57	
Hexachlorobenzene	ug/L	ND	5.0	0.97	04/15/19 20:57	
Hexachlorocyclopentadiene	ug/L	ND	10.0	1.2	04/15/19 20:57	
Hexachloroethane	ug/L	ND	20.0	1.9	04/15/19 20:57	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	0.98	04/15/19 20:57	
Isophorone	ug/L	ND	10.0	1.8	04/15/19 20:57	
N-Nitroso-di-n-butylamine	ug/L	ND	20.0	0.74	04/15/19 20:57	
N-Nitroso-di-n-propylamine	ug/L	ND	20.0	1.1	04/15/19 20:57	
N-Nitrosodiethylamine	ug/L	ND	20.0	0.93	04/15/19 20:57	
N-Nitrosodimethylamine	ug/L	ND	50.0	0.65	04/15/19 20:57	
N-Nitrosodiphenylamine	ug/L	ND	20.0	0.83	04/15/19 20:57	
Naphthalene	ug/L	ND	10.0	2.0	04/15/19 20:57	
Nitrobenzene	ug/L	ND	10.0	1.2	04/15/19 20:57	
Nonylphenol	ug/L	ND	333	2.9	04/15/19 20:57	N2
Pentachlorobenzene	ug/L	ND	20.0	1.3	04/15/19 20:57	
Pentachlorophenol	ug/L	ND	5.0	2.1	04/15/19 20:57	
Phenanthrene	ug/L	ND	10.0	1.1	04/15/19 20:57	
Phenol	ug/L	ND	10.0	0.97	04/15/19 20:57	
Pyrene	ug/L	ND	10.0	1.2	04/15/19 20:57	
Pyridine	ug/L	ND	20.0	1.2	04/15/19 20:57	
2,4,6-Tribromophenol (S)	%.	78	29-132		04/15/19 20:57	
2-Fluorobiphenyl (S)	%.	91	26-102		04/15/19 20:57	
2-Fluorophenol (S)	%.	45	10-66		04/15/19 20:57	
Nitrobenzene-d5 (S)	%.	84	15-106		04/15/19 20:57	
p-Terphenyl-d14 (S)	%.	100	10-120		04/15/19 20:57	
Phenol-d6 (S)	%.	31	10-54		04/15/19 20:57	

LABORATORY CONTROL SAMPLE: 520772

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	50	39.5	79	35-108	
1,2,4-Trichlorobenzene	ug/L	50	37.1	74	44-142	
1,2-Diphenylhydrazine	ug/L	50	38.9	78	62-114	
2,4,5-Trichlorophenol	ug/L	50	40.7J	81	60-118	
2,4,6-Trichlorophenol	ug/L	50	40.6	81	37-144	
2,4-Dichlorophenol	ug/L	50	37.3	75	39-135	
2,4-Dimethylphenol	ug/L	50	22.4	45	32-119	
2,4-Dinitrophenol	ug/L	50	23.6J	47	1-191	
2,4-Dinitrotoluene	ug/L	50	44.9	90	39-139	
2,6-Dinitrotoluene	ug/L	50	44.8	90	50-158	
2-Chloronaphthalene	ug/L	50	41.5	83	60-118	
2-Chlorophenol	ug/L	50	34.3	69	23-134	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 548694
Pace Project No.: 75106031

LABORATORY CONTROL SAMPLE: 520772

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Nitrophenol	ug/L	50	42.4	85	29-182	
3&4-Methylphenol(m&p Cresol)	ug/L	50	26.7	53	33-110	
3,3'-Dichlorobenzidine	ug/L	100	88.9	89	1-262	
4,6-Dinitro-2-methylphenol	ug/L	50	32.5	65	1-181	
4-Bromophenylphenyl ether	ug/L	50	41.0	82	53-127	
4-Chloro-3-methylphenol	ug/L	50	40.5	81	22-147	
4-Chlorophenylphenyl ether	ug/L	50	40.3	81	25-158	
4-Nitrophenol	ug/L	50	23.6J	47	1-132	
Acenaphthene	ug/L	50	38.6	77	47-145	
Acenaphthylene	ug/L	50	39.5	79	33-145	
Anthracene	ug/L	50	40.6	81	27-133	
Benzidine	ug/L	100	37.4J	37	10-140	
Benzo(a)anthracene	ug/L	50	38.5	77	33-143	
Benzo(a)pyrene	ug/L	50	41.9	84	17-163	
Benzo(b)fluoranthene	ug/L	50	44.8	90	24-159	
Benzo(g,h,i)perylene	ug/L	50	47.1	94	1-219	
Benzo(k)fluoranthene	ug/L	50	38.9	78	11-162	
bis(2-Chloroethoxy)methane	ug/L	50	37.5	75	33-184	
bis(2-Chloroethyl) ether	ug/L	50	35.1	70	12-158	
bis(2-Chloroisopropyl) ether	ug/L	50	34.3	69	36-166	
bis(2-Ethylhexyl)phthalate	ug/L	50	44.5	89	8-158	
Butylbenzylphthalate	ug/L	50	41.9	84	1-152	
Chrysene	ug/L	50	41.3	83	17-168	
Cresols (Total)	ug/L	100	57.3	57	36-110	N2
Di-n-butylphthalate	ug/L	50	43.0	86	1-118	
Di-n-octylphthalate	ug/L	50	45.8	92	4-146	
Dibenz(a,h)anthracene	ug/L	50	46.7	93	1-227	
Diethylphthalate	ug/L	50	43.4	87	1-114	
Dimethylphthalate	ug/L	50	43.2	86	1-112	
Fluoranthene	ug/L	50	42.9	86	26-137	
Fluorene	ug/L	50	40.4	81	59-121	
Hexachloro-1,3-butadiene	ug/L	50	37.8	76	24-116	
Hexachlorobenzene	ug/L	50	40.6	81	1-152	
Hexachlorocyclopentadiene	ug/L	50	38.3	77	12-121	
Hexachloroethane	ug/L	50	33.8	68	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	47.0	94	1-171	
Isophorone	ug/L	50	40.6	81	21-196	
N-Nitroso-di-n-butylamine	ug/L	50	38.0	76	49-117	
N-Nitroso-di-n-propylamine	ug/L	50	35.8	72	1-230	
N-Nitrosodiethylamine	ug/L	50	37.7	75	40-140	
N-Nitrosodimethylamine	ug/L	50	23.6J	47	26-77	
N-Nitrosodiphenylamine	ug/L	50	44.4	89	67-115	
Naphthalene	ug/L	50	36.8	74	21-133	
Nitrobenzene	ug/L	50	35.9	72	35-180	
Nonylphenol	ug/L	50	39.9J	80	57-136	N2
Pentachlorobenzene	ug/L	50	40.7	81	40-140	
Pentachlorophenol	ug/L	50	25.6	51	14-176	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
400 West Bethany Drive - Suite 190
Allen, TX 75013
(972)727-1123

QUALITY CONTROL DATA

Project: 548694
Pace Project No.: 75106031

LABORATORY CONTROL SAMPLE: 520772

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/L	50	39.6	79	54-120	
Phenol	ug/L	50	15.3	31	5-112	
Pyrene	ug/L	50	42.6	85	52-115	
Pyridine	ug/L	50	20.5	41	12-110	
2,4,6-Tribromophenol (S)	%.			86	29-132	
2-Fluorobiphenyl (S)	%.			83	26-102	
2-Fluorophenol (S)	%.			44	10-66	
Nitrobenzene-d5 (S)	%.			77	15-106	
p-Terphenyl-d14 (S)	%.			88	10-120	
Phenol-d6 (S)	%.			31	10-54	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 520773 520774

Parameter	Units	75106026001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4,5-Tetrachlorobenzene	ug/L	ND	55.6	50.5	17.8J	23.9	32	47	37-105	29	40	M1
1,2,4-Trichlorobenzene	ug/L	ND	55.6	50.5	17.2	22.5	31	45	44-142	27	40	M1
1,2-Diphenylhydrazine	ug/L	ND	55.6	50.5	19.2J	26.3	35	52	43-124	31	40	M1
2,4,5-Trichlorophenol	ug/L	ND	55.6	50.5	21.9J	29.9J	39	59	50-121	31	40	M1
2,4,6-Trichlorophenol	ug/L	ND	55.6	50.5	22.1	28.2	40	56	37-144	24	40	
2,4-Dichlorophenol	ug/L	ND	55.6	50.5	22.5	28.5	41	56	39-135	23	40	
2,4-Dimethylphenol	ug/L	ND	55.6	50.5	24.3	30.0	44	59	32-119	21	40	
2,4-Dinitrophenol	ug/L	ND	55.6	50.5	8.9J	9.9J	16	20	1-191	10	40	
2,4-Dinitrotoluene	ug/L	ND	55.6	50.5	19.8	29.3	36	58	39-139	39	40	M1
2,6-Dinitrotoluene	ug/L	ND	55.6	50.5	20.5	27.8	37	55	50-158	30	40	M1
2-Chloronaphthalene	ug/L	ND	55.6	50.5	18.1	24.7	33	49	60-118	31	40	M1
2-Chlorophenol	ug/L	ND	55.6	50.5	23.2	25.2	42	50	23-134	8	40	
2-Nitrophenol	ug/L	ND	55.6	50.5	20.6	27.5	37	54	29-182	29	40	
3&4-Methylphenol(m&p Cresol)	ug/L	79.6	55.6	50.5	90.2	105	19	50	10-105	15	40	
3,3'-Dichlorobenzidine	ug/L	ND	111	101	16.5	23.8	15	24	1-262	36	40	
4,6-Dinitro-2-methylphenol	ug/L	ND	55.6	50.5	10.7	13.1	19	26	1-181	20	40	
4-Bromophenylphenyl ether	ug/L	ND	55.6	50.5	19.7	27.7	35	55	53-127	34	40	M1
4-Chloro-3-methylphenol	ug/L	ND	55.6	50.5	25.9	33.1	47	65	22-147	24	40	
4-Chlorophenylphenyl ether	ug/L	ND	55.6	50.5	19.2	27.3	35	54	25-158	35	40	
4-Nitrophenol	ug/L	ND	55.6	50.5	21.1J	20.3J	38	40	1-132	4	40	
Acenaphthene	ug/L	ND	55.6	50.5	18.3	25.5	33	50	47-145	33	40	M1
Acenaphthylene	ug/L	ND	55.6	50.5	18.2	25.7	33	51	33-145	34	40	
Anthracene	ug/L	ND	55.6	50.5	19.9	28.5	36	56	27-133	36	40	
Benzidine	ug/L	ND	111	101	30.5J	32.8J	27	32	10-74	7	40	
Benzo(a)anthracene	ug/L	ND	55.6	50.5	19.7	26.5	36	52	33-143	29	40	
Benzo(a)pyrene	ug/L	ND	55.6	50.5	20.7	28.6	37	57	17-163	32	40	
Benzo(b)fluoranthene	ug/L	ND	55.6	50.5	19.8	26.5	36	52	24-159	29	40	
Benzo(g,h,i)perylene	ug/L	ND	55.6	50.5	26.7	37.6	48	74	1-219	34	40	
Benzo(k)fluoranthene	ug/L	ND	55.6	50.5	18.4	26.1	33	52	11-162	35	40	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
400 West Bethany Drive - Suite 190
Allen, TX 75013
(972)727-1123

QUALITY CONTROL DATA

Project: 548694
Pace Project No.: 75106031

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 520773 520774

Parameter	Units	75106026001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
bis(2-Chloroethoxy)methane	ug/L	ND	55.6	50.5	18.9	25.3	34	50	33-184	29	40	
bis(2-Chloroethyl) ether	ug/L	ND	55.6	50.5	18.8	24.1	34	48	12-158	25	40	
bis(2-Chloroisopropyl) ether	ug/L	ND	55.6	50.5	17.3	22.2	31	44	36-166	25	40	M1
bis(2-Ethylhexyl)phthalate	ug/L	ND	55.6	50.5	27.1	32.8	43	59	8-158	19	40	
Butylbenzylphthalate	ug/L	ND	55.6	50.5	23.8	31.1	43	62	1-152	27	40	
Chrysene	ug/L	ND	55.6	50.5	20.1	27.4	36	54	17-168	31	40	
Cresols (Total)	ug/L	79.6	111	101	116	132	32	52	10-118	13	40	N2
Di-n-butylphthalate	ug/L	ND	55.6	50.5	26.8	37.3	48	74	1-118	33	40	
Di-n-octylphthalate	ug/L	ND	55.6	50.5	24.8	33.4	45	66	4-146	30	40	
Dibenz(a,h)anthracene	ug/L	ND	55.6	50.5	24.6	35.2	44	70	1-227	36	40	
Diethylphthalate	ug/L	ND	55.6	50.5	21.8	30.5	39	60	1-114	33	40	
Dimethylphthalate	ug/L	ND	55.6	50.5	20.7	28.4	37	56	1-112	31	40	
Fluoranthene	ug/L	ND	55.6	50.5	20.5	30.0	37	59	26-137	38	40	
Fluorene	ug/L	ND	55.6	50.5	19.4	27.2	35	54	59-121	34	40	M1
Hexachloro-1,3-butadiene	ug/L	ND	55.6	50.5	17.7	22.9	32	45	24-116	25	40	
Hexachlorobenzene	ug/L	ND	55.6	50.5	20.2	27.7	36	55	1-152	31	40	
Hexachlorocyclopentadiene	ug/L	ND	55.6	50.5	8.4J	7.6J	15	15	10-123		40	
Hexachloroethane	ug/L	ND	55.6	50.5	12J	13.8J	22	27	40-113	14	40	M1
Indeno(1,2,3-cd)pyrene	ug/L	ND	55.6	50.5	24.4	34.5	44	68	1-171	34	40	
Isophorone	ug/L	ND	55.6	50.5	19.8	26.7	36	53	21-196	30	40	
N-Nitroso-di-n-butylamine	ug/L	ND	55.6	50.5	18.1J	25.6	33	51	41-119	34	40	M1
N-Nitroso-di-n-propylamine	ug/L	ND	55.6	50.5	18.6J	24.8	34	49	1-230	28	40	
N-Nitrosodiethylamine	ug/L	ND	55.6	50.5	27.8	29.6	50	59	25-126	6	40	
N-Nitrosodimethylamine	ug/L	ND	55.6	50.5	21.1J	18J	38	36	14-77	16	40	
N-Nitrosodiphenylamine	ug/L	ND	55.6	50.5	21.9	30.9	40	61	35-131	34	40	
Naphthalene	ug/L	ND	55.6	50.5	17.6	23.8	32	47	21-133	30	40	
Nitrobenzene	ug/L	ND	55.6	50.5	18.3	23.8	33	47	35-180	26	40	M1
Nonylphenol	ug/L	ND	55.6	50.5	23J	31.7J	41	63	37-142	32	40	N2
Pentachlorobenzene	ug/L	ND	55.6	50.5	19.1J	26.0	34	51	48-111	30	40	M1
Pentachlorophenol	ug/L	ND	55.6	50.5	19.3	23.9	35	47	14-176	21	40	
Phenanthrene	ug/L	ND	55.6	50.5	19.2	27.6	35	55	54-120	36	40	M1
Phenol	ug/L	14.9	55.6	50.5	30.6	30.3	28	30	5-112	1	40	
Pyrene	ug/L	ND	55.6	50.5	33.3	53.0	60	105	52-115	46	40	R1
Pyridine	ug/L	ND	55.6	50.5	12.3J	8.6J	22	17	10-69	36	40	
2,4,6-Tribromophenol (S)	%						40	61	29-132			
2-Fluorobiphenyl (S)	%						33	50	26-102			
2-Fluorophenol (S)	%						33	34	10-66			
Nitrobenzene-d5 (S)	%						33	48	15-106			
p-Terphenyl-d14 (S)	%						38	55	10-120			
Phenol-d6 (S)	%						28	29	10-54			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
400 West Bethany Drive - Suite 190
Allen, TX 75013
(972)727-1123

QUALITY CONTROL DATA

Project: 548694
Pace Project No.: 75106031

QC Batch: 115496 Analysis Method: EPA 632
QC Batch Method: EPA 632 Analysis Description: 632 HPLC Carbamates
Associated Lab Samples: 75106031001

METHOD BLANK: 520122 Matrix: Water
Associated Lab Samples: 75106031001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Carbaryl	ug/L	ND	4.0	0.61	04/11/19 00:15	
Diuron	ug/L	ND	0.080	0.020	04/11/19 00:15	N2
Nitrobenzene (S)	%.	73	18-113		04/11/19 00:15	

LABORATORY CONTROL SAMPLE: 520123

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbaryl	ug/L	10	10	100	59-119	
Diuron	ug/L	5	4.5	90	61-114	N2
Nitrobenzene (S)	%.			76	18-113	

MATRIX SPIKE SAMPLE: 520124

Parameter	Units	75105824010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Carbaryl	ug/L	ND	10	9.1	91	45-139	
Diuron	ug/L	ND	5	4.6	92	54-127	N2
Nitrobenzene (S)	%.				70	18-113	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
400 West Bethany Drive - Suite 190
Allen, TX 75013
(972)727-1123

QUALITY CONTROL DATA

Project: 548694
Pace Project No.: 75106031

QC Batch: 115813
QC Batch Method: SM 4500-CN-C
Analysis Method: SM 4500-CN-E
Analysis Description: 4500CNE Cyanide, Total
Associated Lab Samples: 75106031002

METHOD BLANK: 521761 Matrix: Water
Associated Lab Samples: 75106031002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cyanide	ug/L	ND	10.0	4.0	04/15/19 16:12	

LABORATORY CONTROL SAMPLE: 521762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	ug/L	100	109	109	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 521763 521764

Parameter	Units	75105984001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	ug/L	ND	100	100	26.2	20.3	26	20	85-115	25	20	M1,R1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 521765 521766

Parameter	Units	75106217006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	ug/L	ND	100	100	93.5	76.1	94	76	85-115	21	20	M1,R1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
400 West Bethany Drive - Suite 190
Allen, TX 75013
(972)727-1123

QUALITY CONTROL DATA

Project: 548694
Pace Project No.: 75106031

QC Batch: 115952
QC Batch Method: SM 4500-CN-C
Analysis Method: SM 4500-CN-G
Analysis Description: 4500CNG Cyanide, Amenable
Associated Lab Samples: 75106031002

METHOD BLANK: 522409
Matrix: Water
Associated Lab Samples: 75106031002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Amenable Cyanide	ug/L	ND	10.0	4.0	04/16/19 12:08	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
400 West Bethany Drive - Suite 190
Allen, TX 75013
(972)727-1123

QUALIFIERS

Project: 548694
Pace Project No.: 75106031

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The Nelac Institute

LABORATORIES

PASI-D	Pace Analytical Services - Dallas

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
N3	Accreditation is not offered by the relevant laboratory accrediting body for this parameter.
R1	RPD value was outside control limits.

Pace Analytical Services, LLC
400 West Bethany Drive - Suite 190
Allen, TX 75013
(972)727-1123

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 548694
Pace Project No.: 75106031

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
75106031001	548694	EPA 608 SF	115635	EPA 608	115740
75106031001	548694	EPA 615	115532	EPA 615	115834
75106031001	548694	EPA 604.1	115494	EPA 604.1	115692
75106031001	548694	EPA 632	115496	EPA 632	115560
75106031001	548694	EPA 625	115639	EPA 625	115794
75106031002	548695	EPA 624 Low	115296		
75106031002	548695	SM 4500-CN-C	115813	SM 4500-CN-E	115883
75106031002	548695	SM 4500-CN-C	115952	SM 4500-CN-G	115953

Pace Analytical	Document Name: Sample Condition Upon Receipt	Document Revised: 03-14-19 Page 1 of 1
	Document No.: F-DAL-C-001-rev.9	Issuing Authority: Pace Dallas Quality Office

Sample Condition Upon Receipt

☑Dallas ☐Ft Worth

WO#: 75106031

Client Name: PCS Project Work order:

Courier: FedEX ☐ UPS ☐ USPS ☐ Client ☐ LSO ☑ PACE ☐ Other: _____

Tracking #: ZY00N303

Custody Seal on Cooler/Box: Yes ☐ No ☑ Packing Material: Bubble Wrap/Bags ☑ Foam ☐ None ☐ Other ☐

Received on ice: Yes ☑ No ☐ Type of Ice: Wet ☑ Blue ☐

Thermometer Used: 1h-11 Cooler Temp °C: 3.4 (Recorded) 0 (Correction Factor) 3.4 (Actual)

Temperature should be above freezing to 6°C

Chain of Custody relinquished	Yes ☐ No ☑	
Sampler name & signature on COC	Yes ☐ No ☑	
Short HT analyses (<72 hrs)	Yes ☐ No ☑	
Sufficient Volume received	Yes ☐ No ☑	
Correct Container used	Yes ☑ No ☐	
Container Intact	Yes ☑ No ☐	
Sample pH Acceptable pH Strips:_____ Residual Chlorine Present Cl Strips:_____ Sulfide Present Lead Acetate Strips:_____	Yes ☐ No ☐ NA ☑ Yes ☐ No ☐ NA ☑ Yes ☐ No ☐ NA ☑	
Are soil samples (volatiles, TPH) received in 5035A Kits	Yes ☐ No ☐ NA ☑	
Unpreserved 5035A soil frozen within 48 hrs	Yes ☐ No ☐ NA ☑	
Headspace in VOA (>6mm)	Yes ☐ No ☑ NA ☐	
Project sampled in USDA Regulated Area: State Sampled: TX	Yes ☑ No ☐	
Non-Conformance(s):	Yes ☐ No ☑	

POLLUTION CONTROL SERVICES

1532 Universal City Blvd, Suite 100
Universal City, TX 78148-3318
Facsimilie 210.658.7903
210.340.0343

CHAIN OF CUSTODY & SUBCONTRACT TRACKING SHEET

TO: Pace Analytical Services, Inc.
400 W Bethany Rd, Ste 190
Allen, TX 75013

Relinquished by: Greg Felux
Date/Time: 4/4/2019 @ 1700
Received by: Hwf-hly / Pace
Date/Time: 4/5/19 1045 3.4 12-11

PCS#	Date	Time	Analysis Requested	Pres	T. A. T.
548694	04/04/2019	0700	604.1 Hexachlorophene	ICE	std
548694	----------	----	Semi Volatiles 625		----
548694	----------	----	Herbicides 615		----
548694	----------	----	Pesticide 1657		----
548694	----------	----	Pesticides 617		----
548694	----------	----	Pesticides 632		----
548694	----------	----	608 PCBs		----
548695	04/04/2019	0930	Cyanide, Amenable		
548695	----------	----	Volatiles 624		----
548695	----------	----	Phenolics		----

-001

-002

WO#: 75106031
PM: MLM Due Date: 04/19/19
CLIENT: PCS

Comments/Special Instructions: _____

Unless otherwise requested, send results and invoice to:

Chuck Wallgren
Pollution Control Services
1532 Universal City Blvd, Suite 100
Universal City, TX 78148-3318

Authorized by: _____ Date: 4/4/19

Ana-Lab Corp. P.O. Box 9000 Kilgore, TX 75663

Phone 903/984-0551 FAX 903/984-5914 e-Mail corp@ana-lab.com

Employee Owned Integrity Caring Continual Improvement

Results

Printed: 04/16/2019 14:43

75106031

Account	*Project*
PAMM-N	869499

Report To

Pace Analytical - Dallas
Melissa McCullough
400 West Bethany Drive
Suite 190
Allen, TX 75013

Results

1773486 75106031001 *Received:* 04/09/2019

Non-Potable Water *Collected by:* Client Pace Analytical - Da *PO:* DASUB2030
Taken: 04/04/2019 07:00:00

EPA 1657 *Prepared:* 832522 04/10/2019 11:00:00 *Analyzed* 833444 04/15/2019 20:02:00 EMT

	Parameter	*Results*	*Units*	*RL*	*Flag*	*CAS*	*Bottle*
z	Azinphos-methyl (Guthion)	<0.0506	ug/L	0.0506	XD	86-50-0	04
z	Chlorpyrifos	<0.0404	ug/L	0.0404	X	2921-88-2	04
z	Demeton	<0.0506	ug/L	0.0506	X	8065-48-3	04
z	Diazinon	<0.050	ug/L	0.050	X	333-41-5	04
z	Malathion	<0.0506	ug/L	0.0506	X	121-75-5	04
z	Parathion, ethyl	<0.0506	ug/L	0.0506	X	56-38-2	04
z	Parathion, methyl	<0.0404	ug/L	0.0404	X	298-00-0	04

EPA 617 *Prepared:* 832520 04/10/2019 11:00:00 *Analyzed* 833271 04/12/2019 16:28:00 EMT

	Parameter	*Results*	*Units*	*RL*	*Flag*	*CAS*	*Bottle*
z	Kelthane (Dicofol)	<0.0404	ug/L	0.0404		115-32-2	03
z	Methoxychlor	<0.0101	ug/L	0.0101		72-43-5	03
z	Mirex	<0.0101	ug/L	0.0101		2385-85-5	03

1773487 75106031002 *Received:* 04/09/2019

Non-Potable Water *Collected by:* Client Pace Analytical - Da *PO:* DASUB2030
Taken: 04/04/2019 09:30:00

EPA 420.4 1 *Prepared:* 833055 04/12/2019 14:45:00 *Analyzed* 833437 04/15/2019 17:51:00 MLC

	Parameter	*Results*	*Units*	*RL*	*Flag*	*CAS*	*Bottle*
N	Phenolics, Total Recoverable	<0.005	mg/L	0.005			02

Sample Preparation

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Employee Owned Integrity Caring Continual Improvement

Results

Printed: 04/16/2019 14:43

1773486 75106031001 *Received:* 04/09/2019

DASUB2030

EPA 1657	*Prepared:*	*832522*	*04/10/2019*	*11:00:00*	*Analyzed*	*833444*	*04/15/2019*	*20:02:00*	*EMT*
Organophos. Pesticides	**Entered**							**04**	
EPA 614/608/617/1657	*Prepared:*	*832520*	*04/10/2019*	*11:00:00*	*Analyzed*	*832520*	*04/10/2019*	*11:00:00*	*MCC*
Liquid-Liquid Extr. W/Hex Ex	**1/989**	**ml**						**02**	
EPA 614/608/617/1657	*Prepared:*	*832522*	*04/10/2019*	*11:00:00*	*Analyzed*	*832522*	*04/10/2019*	*11:00:00*	*MCC*
Solvent Extraction	**1/989**	**ml**						**02**	
EPA 617	*Prepared:*	*832520*	*04/10/2019*	*11:00:00*	*Analyzed*	*833271*	*04/12/2019*	*16:28:00*	*EMT*
z **Dicofol/Methoxychlor/Mirex**	**Entered**							**03**	

1773487 75106031002 *Received:* 04/09/2019

DASUB2030

EPA 420.4 1	*Prepared:*	*833055*	*04/12/2019*	*14:45:00*	*Analyzed*	*833055*	*04/12/2019*	*14:45:00*	*MLC*
N **Phenol Distillation**	**50/50**	**ml**						**01**	

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Employee Owned Integrity Caring Continual Improvement

Results

Printed: 04/16/2019 14:43

Qualifiers:

D - Duplicate RPD was higher than expected X - Standard reads higher than desired.

We report results on an As Received or wet basis unless marked Dry Weight. Unless otherwise noted, testing was performed at Ana-labs corporate laboratory that holds the following Federal and State certificates: EPA Lab Number TX00063, US Department of Agriculture Soil Import Permit P330-17-00117, Texas Commission on Environmental Quality Commercial Drinking Water Lab Approval (Lab ID: TX219), Texas Commission on Environmental Quality NELAP T104704201-19-15, Louisiana Department of Environmental Quality Laboratory Certification (NELAP, LELAP) #02008, Louisiana Department of Health and Hospitals Drinking Water (NELAP) Certificate No LA026, Oklahoma Department of Environmental Quality TNI Laboratory Accreditation Program Certificate No. 2018-126, Arkansas Department of Environmental Quality Certification #18-068-0. The Accredited column designates accreditation by N -- NELAC, or z -- not covered under NELAC scope of accreditation.

These analytical results relate to the sample tested. This report may NOT be reproduced EXCEPT in FULL without written approval of Ana-Lab Corp. Unless otherwise specified, these test results meet the requirements of NELAC.

RL is the Reporting Limit (sample specific quantitation limit) and is at or above the Method Detection Limit (MDL). CAS is Chemical Abstract Service number. RL is our Reporting Limit, or Minimum Quantitation Level. The RL takes into account the Instrument Detection Limit (IDL), Method Detection Limit (MDL), and Practical Quantitation Limit (PQL), and any dilutions and/or concentrations performed during sample preparation (EQL). Our analytical result must be above this RL before we report a value in the 'Results' column of our report (without a 'J' flag). Otherwise, we report ND (Not Detected above RL), because the result is "<" (less than) the number in the RL column. MAL is Minimum Analytical Level and is typically from regulatory agencies. Unless we report a result in the result column, or interferences prevent it, we work to have our RL at or below the MAL.

Bill Peery

Bill Peery, MS, VP Technical Services

ANA-LAB CORP. THE COMPLETE SERVICE LAB

Ana-Lab Corp. P.O. Box 9000 Kilgore, TX 75663

Phone 903/984-0551 FAX 903/984-5914 e-Mail corp@ana-lab.com LELAP-accredited #02008

Employee Owned Integrity Caring Continual Improvement

Quality Control

Printed 04/16/2019

Account	Project
PAMM-N	869499

Report To

Pace Analytical - Dallas
Melissa McCullough
400 West Bethany Drive
Suite 190
Allen, TX 75013

Analytical Set 833437 EPA 420.4 1

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Phenolics, Total Recoverable	833055	ND	0.00377	0.005	mg/L	119831135

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Phenolics, Total Recoverable	0.203	0.200	mg/L	102	90.0 - 110	119831134
	0.200	0.200	mg/L	100	90.0 - 110	119831145
	0.188	0.200	mg/L	94.0	90.0 - 110	119831153
	0.194	0.200	mg/L	97.0	90.0 - 110	119831162

Duplicate

Parameter	Sample	Result	Unknown	Unit	RPD		Limit%
Phenolics, Total Recoverable	1773734	0.0952	0.116	mg/L	19.7		20.0
	1773754	0.0106	0.0148	mg/L	33.1	*	20.0

ICV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Phenolics, Total Recoverable	0.196	0.200	mg/L	98.0	90.0 - 110	119831133

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Phenolics, Total Recoverable	833055	0.211	0.211	0.200	90.0 - 110	106	106	mg/L	0	20.0

Mat. Spike

Parameter	Sample	Spike	Unknown	Known	Units	Recovery %	Limits %	File	
Phenolics, Total Recoverable	1773734	0.249	0.116	0.200	mg/L	66.5	90.0 - 110	119831140	*
	1773754	0.223	0.0148	0.200	mg/L	104	90.0 - 110	119831143	

Analytical Set 833271 EPA 617

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Kelthane (Dicofol)	832520	ND	0.0352	0.040	ug/L	119828229
Methoxychlor	832520	ND	0.00897	0.010	ug/L	119828229
Mirex	832520	ND	0.00905	0.010	ug/L	119828229

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Kelthane (Dicofol)	110	100	ug/L	110	70.0 - 130	119828225
Methoxychlor	52.0	50.0	ug/L	104	70.0 - 130	119828225
Mirex	49.2	50.0	ug/L	98.5	70.0 - 130	119828225

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Kelthane (Dicofol)	832520	1.10	1.13	2.00	0.100 - 130	55.0	56.5	ug/L	2.69	30.0

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Quality Control

Printed 04/16/2019

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Methoxychlor	832520	0.853	0.838	1.00	33.6 - 137	85.3	83.8	ug/L	1.77	30.0
Mirex	832520	0.635	0.664	1.00	37.6 - 119	63.5	66.4	ug/L	4.46	30.0

Surrogate

Parameter	Sample	Type	Reading	Known	Units	Recover%	Limits%	File
Decachlorobiphenyl		CCV	48.6	100	ug/L	48.6	10.0 - 150	119828225
Tetrachloro-m-Xylene (Surr)		CCV	49.0	100	ug/L	49.0	10.0 - 150	119828225
Decachlorobiphenyl	832520	Blank	46.2	100	ug/L	46.2	10.0 - 150	119828229
	832520	LCS	75.1	100	ug/L	75.1	10.0 - 150	119828230
	832520	LCS Dup	77.4	100	ug/L	77.4	10.0 - 150	119828231
Tetrachloro-m-Xylene (Surr)	832520	Blank	34.8	100	ug/L	34.8	10.0 - 150	119828229
	832520	LCS	30.8	100	ug/L	30.8	10.0 - 150	119828230
	832520	LCS Dup	34.2	100	ug/L	34.2	10.0 - 150	119828231
Decachlorobiphenyl	1773486	UNKNOWN	0.0499	0.101	ug/L	49.4	10.0 - 150	119828326
Tetrachloro-m-Xylene (Surr)	1773486	UNKNOWN	0.0434	0.101	ug/L	43.0	10.0 - 150	119828326

Analytical Set 833444 EPA 1657

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Azinphos-methyl (Guthion)	832522	ND	0.0461	0.050	ug/L	119831262
Chlorpyrifos	832522	ND	0.0394	0.040	ug/L	119831262
Demeton	832522	ND	0.0377	0.050	ug/L	119831262
Diazinon	832522	ND	0.0432	0.050	ug/L	119831262
Malathion	832522	ND	0.0466	0.050	ug/L	119831262
Parathion, ethyl	832522	ND	0.0292	0.050	ug/L	119831262
Parathion, methyl	832522	ND	0.0395	0.040	ug/L	119831262

CCV

Parameter	Reading	Known	Units	Recover%	Limits%		File
Azinphos-methyl (Guthion)	965	1000	ug/L	96.5	80.0 - 120		119831260
	949	1000	ug/L	94.9	80.0 - 120		119831269
	1250	1000	ug/L	125	80.0 - 120	*	119831273
Chlorpyrifos	939	1000	ug/L	93.9	80.0 - 120		119831260
	1050	1000	ug/L	105	80.0 - 120		119831269
	1330	1000	ug/L	133	80.0 - 120	*	119831273
Demeton	1070	1000	ug/L	107	80.0 - 120		119831260
	1120	1000	ug/L	112	80.0 - 120		119831269
	1450	1000	ug/L	145	80.0 - 120	*	119831273
Diazinon	1070	1000	ug/L	107	80.0 - 120		119831260
	1170	1000	ug/L	117	80.0 - 120		119831269
	1470	1000	ug/L	147	80.0 - 120	*	119831273
Malathion	938	1000	ug/L	93.8	80.0 - 120		119831260
	1270	1000	ug/L	127	80.0 - 120	*	119831269
	1300	1000	ug/L	130	80.0 - 120	*	119831273
Parathion, ethyl	1060	1000	ug/L	106	80.0 - 120		119831260
	1320	1000	ug/L	132	80.0 - 120	*	119831269
	1180	1000	ug/L	118	80.0 - 120		119831273
Parathion, methyl	1050	1000	ug/L	105	80.0 - 120		119831260
	1180	1000	ug/L	118	80.0 - 120		119831269
	1390	1000	ug/L	139	80.0 - 120	*	119831273

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Quality Control

Printed 04/16/2019 Page 3 of 3

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Azinphos-methyl (Guthion)	832522	0.570	0.300	1.00	0.100 - 166	57.0	30.0	ug/L	62.1 *	50.0
Chlorpyrifos	832522	0.229	0.269	1.00	0.100 - 109	22.9	26.9	ug/L	16.1	50.0
Demeton	832522	0.161	0.155	1.00	0.100 - 101	16.1	15.5	ug/L	3.80	50.0
Diazinon	832522	0.278	0.306	1.00	0.100 - 106	27.8	30.6	ug/L	9.59	50.0
Malathion	832522	0.269	0.290	1.00	0.100 - 113	26.9	29.0	ug/L	7.51	50.0
Parathion, ethyl	832522	0.257	0.270	1.00	0.100 - 111	25.7	27.0	ug/L	4.93	50.0
Parathion, methyl	832522	0.239	0.296	1.00	0.100 - 109	23.9	29.6	ug/L	21.3	50.0

Surrogate

Parameter	Sample	Type	Reading	Known	Units	Recover%	Limits%	File
Tributylphosphate		CCV	1090	1000	ug/L	109	0.100 - 118	119831260
		CCV	1120	1000	ug/L	112	0.100 - 118	119831269
		CCV	1430	1000	ug/L	143 *	0.100 - 118	119831273
Triphenylphosphate		CCV	1040	1000	ug/L	104	0.100 - 147	119831260
		CCV	972	1000	ug/L	97.2	0.100 - 147	119831269
		CCV	1380	1000	ug/L	138	0.100 - 147	119831273
Tributylphosphate	832522	Blank	656	1000	ug/L	65.6	0.100 - 118	119831262
	832522	LCS	334	1000	ug/L	33.4	0.100 - 118	119831263
	832522	LCS Dup	302	1000	ug/L	30.2	0.100 - 118	119831264
Triphenylphosphate	832522	Blank	596	1000	ug/L	59.6	0.100 - 147	119831262
	832522	LCS	351	1000	ug/L	35.1	0.100 - 147	119831263
	832522	LCS Dup	397	1000	ug/L	39.7	0.100 - 147	119831264
Tributylphosphate	1773486	UNKNOWN	0.612	1.01	ug/L	60.6	0.100 - 118	119831265
Triphenylphosphate	1773486	UNKNOWN	0.594	1.01	ug/L	58.8	0.100 - 147	119831265

* Out RPD is Relative Percent Difference: abs(r1-r2) / mean(r1,r2) * 100% Recover% is Recovery Percent: result / known * 100%

Blank - Method Blank; CCV - Continuing Calibration Verification; ICV - Initial Calibration Verification

Chain of Custody

Pace Analytical®
www.pacelabs.com

Workorder: 75106031 **Workorder Name:** 548694 **Results Requested By:** ~~4/10/2019~~ Normal TAT

Report / Invoice To

Melissa McCullough
Pace Analytical Dallas
400 West Bethany Drive
Suite 190
Allen, TX 75013
Phone (972)727-1123
Email: melissa.mccullough@pacelabs.com

Subcontract To: Ana Lab P.O. DASUB 2030

State of Sample Origin: TX TPDES

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4	Preserved Containers: Unpreserved	1557 & 617	420.1 Phenol	LAB USE ONLY
1	548694	4/4/2019 07:00	75106031001	Water		2	X	~~X~~	173486
2	548695	4/4/2019 09:30	75106031002	Water	1		~~X~~	X mm 4.8.19	487
3									
4									
5									

Transfers	Released By	Date/Time	Received By	Date/Time
1	Miranda [signature] PAL	4.8.19 1700	[signature]	4.8.19 1700
2	FedEx	4/9/19 1020	Chase Parker Ana-Lab	4/9/19 1020
3				

Comments

See attached list TPDES
RL- 420 Phenol 10ug/L

Cooler Temperature on Receipt °C | Custody Seal (Y) or N | Received on Ice (Y) or N | Samples Intact (Y) or N

See Attached for Tracking # and Temp

869499 CoC Print Group 001 of 001

ORIGIN ID:DNEA (972) 727-1123
SAMPLE RECIEVING
PACE ANALYTICAL
400 BETHANY STE 190

ALLEN, TX 75013
UNITED STATES US

SHIP DATE: 08APR19
ACTWGT: 45.00 LB MAN
CAD: 0508764/CAFE3211

BILL SENDER

TO SAMPLE RECEIVING
ANA LAB
2600 DUDLEY RD

KILGORE TX 75662
(903) 984-0551

REF:

FedEx Express

TRK# 0201 4901 3087 4009

TUE - 09 APR 10:30A
PRIORITY OVERNIGHT

46 GGGA

75662
TX-US SHV

Therm#	Corr Fact	Temp(°C)
☐ 5205	___	___
☐ 6449	___	___
☑ 6444	0.0	2.6/2.6
☐ 6093	___	___

Date 4/9 Time 1080 Tech

Pollution Control Services

Sample Log-In Checklist

5 4 8 6 9 4

PCS Sample No(s) 5 4 8 6 9 4 – 5 4 8 6 9 5 COC No.

Client/Company Name: Sapa S.A.R.A Checklist Completed by: GWR

4/4/19 GW

Sample Delivery to Lab Via:
Client Drop Off ✓ Commercial Carrier: Bus ___ UPS ___ Lone Star ___ FedEx ___ USPS ___
PCS Field Services: Collection/Pick Up___ Other:___

Sample Kit/Coolers
Sample Kit/Cooler? Yes ✓ No___ Sample Kit/Cooler: Intact? Yes ✓ No___
Custody Seals on Sample Kit/Cooler: Not Present ✓ If Present, Intact ___ Broken ___
Sample Containers Intact; Unbroken and Not Leaking? Yes ✓ No ___
Custody Seals on Sample Bottles: Not Present ✓ If Present, Intact ___ Broken ___
COC Present with Shipment or Delivery or Completed at Drop Off? Yes ✓ No ___
Has COC sample date/time and other pertinent information been provided by client/sampler? Yes: ✓ No: ___
Has COC been properly Signed when Received/Relinquished? Yes ✓ No ___
Does COC agree with Sample Bottle Information, Bottle Types, Preservation, etc.? Yes ✓ No ___
All Samples Received before Hold Time Expiration? Yes ✓ No ___
Sufficient Sample Volumes for Analysis Requested? Yes ✓ No ___
Zero Headspace in VOA Vial if Present? Yes ___ No ___

Sample Preservation:
* *Cooling:* Not Required ___ or Required ✓
If cooling required, record temperature of submitted samples Observed/Corrected 4 / 1 °C
Is Ice Present in Sample Kit/Cooler? ✓ Yes ___ No Samples received same day as collected? ✓ Yes ___ No
Lab Thermometer Make and Serial Number: EX Tech 10093657 Other: ___

4/4/19 GW

Acid Preserved Sample - If present, is pH <2? Yes ✓ No ___ ** ✓ H_2SO_4 ✓ HNO_3 ___ H_3PO_4
Base Preserved Sample - If present, is pH >12? 4/4/19 GW Yes ✓ No ___ ✓ NaOH
Other Preservation:___ If Present, Meets Requirements? Yes___ No___
Sample Preservations Checked by: GW Date 4/4/19 Time 1006
pH paper used to check sample preservation (PCS log #): 19-023 (HEM pH checked at analysis).

Samples Preserved/Adjusted by Lab: Lab #	Parameters Preserved	Preservative Used	Log #

Adjusted by Tech/Analyst:___ Date :___ Time:___

Client Notification/ Documentation for "No" Responses Above/ Discrepancies/ Revision Comments
Person Notified: ___ Contacted by:___
Notified Date: ___ Time: ___
Method of Contact: At Drop Off:___ Phone ___ Left Voice Mail ___ E-Mail ___ Fax ___
Unable to Contact___ Authorized Laboratory to Proceed :___(Lab Director)
Regarding / Comments:___

Actions taken to correct problems/discrepancies:___

Receiving qualifier needed (*requires client notification above*) Temp. ___ Holding Time ___ Initails: ___
Receiving qualifier entered into LIMS at login ___ Initial/Date: ___
Revision Comments: Rev. 7 PCS# 548964 – Corrected RL for Nickel aw

** Samples submitted for Metals Analysis (except Hex Cr) or Drinking Water for Coliform Bacteria Only are not required to be iced. Samples collected prior day to receipt at the laboratory must meet method specific thermal cooling requirements, "or will be flagged accordingly". Samples delivered the same day as collected may not meet thermal criteria, but shall be considered acceptable if evidence that the chilling process has begun, such as arrival on ice (EPA 815-F-08-006, June 2008). ** Water samples for metals analysis that are not acid preserved prior to shipment may be acceptably preserved by the laboratory on receipt – however, the sample digestion procedure must be delayed for at least 24 hours after preservation by the laboratory.*

Salitrillo Wastewater Discharge Permit Amendment 08/2019
TPDES No. WQ0010749-001 (EPA I.D. TX0053074)

Attachment 11

Other Industrial User Information

Reference: Domestic Technical Report 6.0

Section 1 A

Attachment 11

Other Industrial User Information

The four Other IUs listed are not SIUs since they discharge less than 25,000 gallons per day and do not have the potential of causing an interference or pass through at the Salitrillo WWTP.

The four listed as Other IUs are:

Supa Doors Inc. SIC Code 2431
1732 Universal City BLVD, Universal City, Texas 78148.
0 gallons per day Process wastewater discharged
900 gallons per day Non-process wastewater discharged

Meadow Burke Products SIC Code 3499
8521 FM 1976, Converse, Texas 78109.
0 gallons per day Process wastewater discharged
789 gallons per day Non-process wastewater discharged

Ingram Ready Mix SIC Code 3273
9450 FM 78, Converse, Texas 78109.
0 gallons per day Process wastewater discharged
2393 gallons per day Non-process wastewater discharged

Featherlite Building Products Corp. SIC Code 3271
418 Gibbs Sprawl Rd., Converse, Texas 78109.
0 gallons per day Process wastewater discharged
70 gallons per day Non-process wastewater discharged

Salitrillo Wastewater Discharge Permit Amendment 08/2019
TPDES No. WQ0010749-001 (EPA I.D. TX0053074)

Attachment 12

Significant Industrial User Information

Reference: Domestic Technical Report 6.0

Section 3

Alamo Plating and Metal Finishing LTD
Effluent Treatment Procedures

Overview:

Alamo Plating and Metal Finishing produces liquid waste from normal operations that are pretreated using industry standard practices and techniques. No continuous effluent stream is discharged from Alamo Plating and Metal Finishing. All effluents are treated on a batch treatment basis. Alamo Plating and Metal Finishing has the capacity to batch treat up to 1000 gallons of liquids at a time, with a typical batch treatment consisting of 500-900 gallons up to several times a week. These liquids are treated for pH and metal concentration. Alamo Plating and Metal Finishing uses a pH meter and a Hydrodyne colorimeter as analytical devices used to measure metal concentrations. Alamo Plating and Metal Finishing is capable of testing for Aluminum, Copper, Cyanide, Nickel, Free Chlorine, Hex Chrome, and Zinc in house. Alamo Plating and Metal Finishing uses the product Broco WCM40 metal precipitant supplied by Broco Products and caustic soda as the method for treating liquids containing metals. Once the liquids have been treated and are in compliance with limits set forth by the EPA and SARA regulatory agencies, the results are recorded in a POTW discharge log, and the liquid is then filtered with a filter plate press and the effluent is discharged to the POTW. The resultant sludge is then dried, barreled and finally shipped off site for disposal. The current effluent streams generated and treated at Alamo Plating and Metal Finishing are listed below along with their treatment methods.

All treatments listed on this procedure will be performed by trained personnel at Alamo Plating and Metal Finishing. The operator will sign off each time a treatment is performed. A training record will be maintained for each operator trained for treatment.

If at anytime an accidental discharge occurs the treatment operator will immediately contact The SARA office for notification of discharge.

Acids:

Muratic and Nitric acids used in the stripping of plating will be treated using the following procedure.

1. **Make sure the valve to POTW is fully closed.**
2. **Add 200 gallons of water to batch treatment tank for each 55 gallons of acid to treat.**
3. **Add Acid to batch treatment tank.**
4. **Check and adjust pH to between 6.0 to 8.5 by slowly adding caustic soda.**
5. **Add 100 gallons per 55 gallons of acid treated to cool solution.**
6. **Add sufficient Broco WCM40 and caustic soda to precipitate metals.**
7. **Mix.**
8. **Allow up to 2 hours to settle.**
9. **Take a grab sample and test for metals using the colorimeter.**
10. **If metals are present above acceptable limits, repeat steps 6 through 9.**
11. **Filter effluent to POTW with filter press.**

Alkalines:

Soaps used in the metals cleaning cycle include MacDermid 88A which is a sodium metasilicate type of soap.

Soaps used in the cleaning cycle will be treated using the following procedure.

1. **Make sure the valve to POTW is fully closed.**
2. **Add Alkaline to batch treatment tank.**
3. **Check and adjust pH to between 6.0 to 8.5 with muratic acid or nitric acid.**
4. **Add sufficient Broco WCM40 to precipitate metals.**
5. **Mix.**
6. **Allow up to 2 hours to settle.**
7. **Take a grab sample and test for metals using the colorimeter.**
8. **If metals are present above acceptable limits, repeat steps 4 through 7.**
9. **Filter effluent to POTW with filter press.**

Floor cleaning:

From time to time the floors are rinsed in the production areas and the resultant liquid is treated using the following procedure.

1. **Make sure the valve to POTW is fully closed.**
2. **Add floor cleaning liquid to batch treatment tank.**
3. **Check and adjust pH to between 6.0 to 8.5.**
4. **Add sufficient Broco WCM40 to precipitate metals.**
5. **Mix.**
6. **Allow up to 2 hours to settle.**
7. **Take a grab sample and test for metals using the colorimeter.**
8. **If metals are present above acceptable limits, repeat steps 4 through 7.**
9. **Filter effluent to POTW with filter press.**

Treatment limits.

All colorimeter results will be checked against the limits listed below.

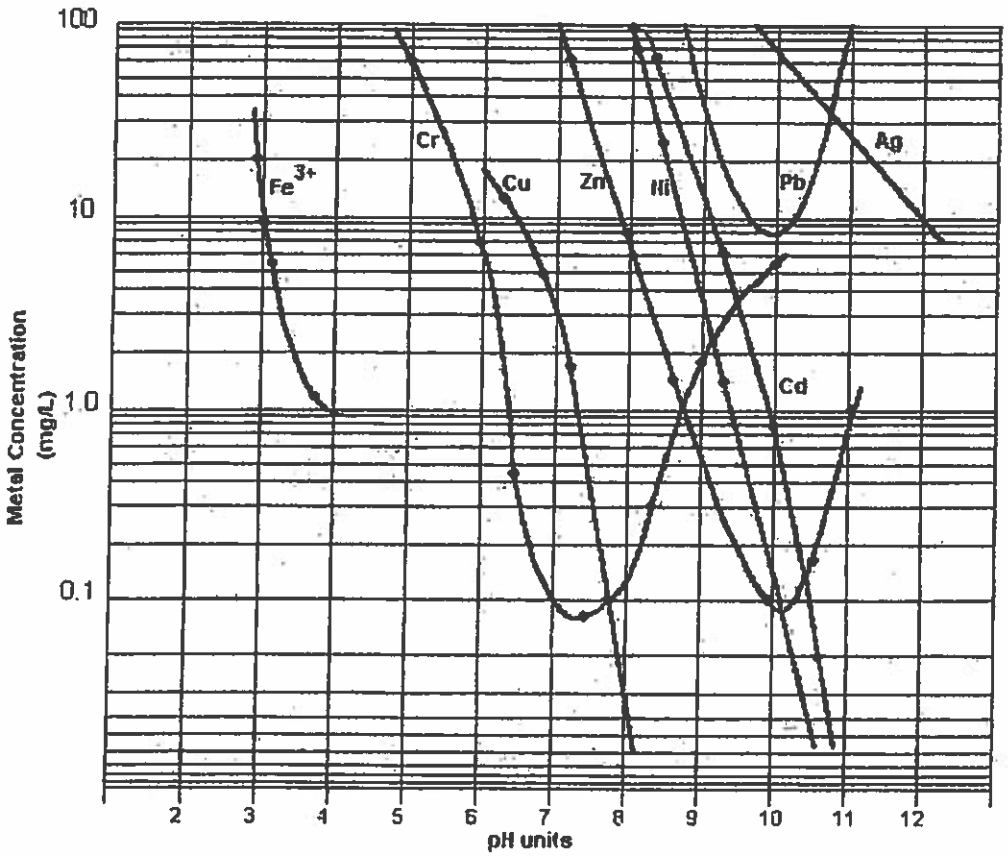
Metal	Daily Composite	Grab Sample
Chromium	1.0	5.0
Copper	1.0	2.0
Cyanide (total)	2.5	
Nickel	2.0	3.0
Silver	0.1	0.2
Zinc	2.0	6.0

Hydroxide Precipitation

- 5

Hydroxide Precipitation

The most common used method to remove soluble metal ions from solution is to precipitate the ion as a metal hydroxide. The process is readily automated and controlled by a simple pH controller. By raising the pH value of a solution with a common alkaline material such as lime, or sodium hydroxide the corresponding metallic hydroxide compounds become insoluble and precipitate from solution. Below is a metal hydroxide solubility curve showing the solubility of the common heavy metal ions and their respective solubility versus pH.



If copper is reviewed, it is seen that at a pH of 6 copper has a solubility of 20 mg/l and at a pH of 8.0, the solubility is 0.05 mg/l.

Nickel has a similar curve but it occurs at 3 pH points high. At a pH of 8.0 nickel has a solubility of 70 mg/l and at a pH of 10.2 the solubility is 0.1 mg/l.

Several metals such as chromium and zinc are amphoteric, being soluble at both alkaline and acid conditions. Chromium reaches its least theoretical chromium solubility of 0.08 at pH of 7.5.

If both chromium and nickel are present a pH value that precipitates both ions must be chosen. It is common to utilize a pH of 9.0 - 9.5 to precipitate both metals.

The theoretical solubility usually does not exist in practice. Metallic coagulant such as ferric chloride or aluminum sulfate are generally used to accelerate the coagulation and precipitation of the heavy metals. Even when not added they are present from other metal processing solutions such as the pickling bath. Ferric hydroxide and/or aluminum hydroxide precipitate and tend to form co-precipitate with nickel and chromium. The net is a metallic ion concentration lower than would be predicted from the solubility curve.

The effluent limitations for chromium and nickel are both 2.4 mg/l to discharge to a city sewer in the U.S. A pH value of 9 - 9.5 will usually precipitate both ions to their required level.

If chromium must be precipitated to a level less than 0.5 mg/l the pH must be operated at 7.0-8.0. If nickel is present it must be precipitated with sulfide as the metallic sulfide ion. Chromium does not form insoluble sulfide precipitates and must be precipitated as the hydroxide at 7.0 - 8.0.

Attached is the heavy metal sulfide solubility curves. The sulfide solubility is several orders of magnitude lower than the comparable hydroxide.

Ammonical Complexes

Most heavy metal ions readily precipitate by raising the pH of solution, forming the respective metal hydroxide compound. A hydroxide precipitation curve is attached demonstrating the relationship

Certain metal ions, primarily copper, zinc and cadmium readily form metallic complexes with ammonia. The ammonical metal complexes remain vary soluble at the higher pH values prohibiting the precipitation of the respective metal hydroxide. There are several methods conventionally used to destroy the ammonical complex and precipitate the metallic ion.

The ammonia ion may be destroyed by oxidation with chlorine or ozone. Eliminating the ammonia destroys the complex. However, the cost is prohibitive when compared to other methods.

The addition of soluble ferrous ion as either ferrous sulfate or ferrous chloride will coprecipitate the metallic ion with the iron hydroxide.

Sulfide Solubility

The most economical method is to add soluble sulfide ions and break the ammonical complex by precipitating the metallic sulfide compounds. The sulfide solubility chart below demonstrates the solubility of the metal sulfide compounds. Copper sulfide, for example, is a very insoluble compound and the presence's of soluble sulfide precipitates the copper as it dissociates from the ammonical complex. Ultimately, the copper is all removed from the complex and precipitated as copper sulfide. The ammonia remains in the solution.

Alamo Plating and Metal Finishing
Batch Treatment Log

Date	Time	Pre-Treatment Volume gallons	pH	PH-Treatment Description	Post-Treatment Volume Gallons	pH	Ni mg/l	Cu mg/l	Cr^3 mg/l	Operator
6-24-19		800	5.5	Add soda	800	7.6	.3	.2	NT	SG
7-8-19		800	6.1	Add soda	800	7.5	.4	.2	NT	[illegible]
7-24-19		800	6.2	Add soda	800	7.4	.4	.1	NT	SG
7-29-19		900	6.8	Add Soda	900	7.5	.4	.6	NT	SG

Metal Concentration Limits

Chromium	1.0 mg/l
Copper	1.0 mg/l
Nickel	2.0 mg/l

pH Range 6.0-8.5

Alamo Plating and Metal Finishing
Batch Treatment Log

Date	Time	Pre-Treatment Volume gallons	pH	PH-Treatment Description	Post-Treatment Volume Gallons	pH	Ni mg/l	Cu mg/l	Cr^3 mg/l	Operator
5-17-17		800	6.5	Add Soda	800	7.6	.4	.12	NT	Steven Ga
7-14-17		800	6.5	ADD Soda	800	7.4	.4	.3	NT	Steven Ga
7-21-17		750	6.5	ADD Soda	750	7.2	.3	.12	NT	Steven Ga
8-5-17		800	6.3	Add Soda	800	7.6	.4	.12	NT	Steven Ga
8-19-17		800	6.3	Add soda	800	7.2	.3	.2	NT	SG
9-3-17		800	6.7	Add Soda	800	7.4	.4	.3	NT	SG
9-16-17		750	6.1	Add Soda	750	7.6	.3	.12	NT	SG
10-6-17		800	6.0	Add Soda	800	7.7	.3	.2	NT	SG
10-21-17		800	6.2	Add Soda	800	7.5	.4	.2	NT	SG
11-5-17		800	6.3	Add Soda	800	7.7	.4	.3	NT	SG
11-20-17		700	6.1	Add Soda	700	7.5	.3	.3	NT	SG
12-5-17		800	6.0	Add Soda	800	7.4	.4	.3	NT	SG
12-21-17		700	6.6	Add Soda	700	7.6	.3	.12	NT	SG
1-10-18		800	6.1	Add Soda	800	7.4	.4	.3	NT	SG
1-24-18		800	6.0	Add Soda	800	7.7	.3	.2	NT	SG

Metal Concentration Limits

Chromium	1.0 mg/l
Copper	1.0 mg/l
Nickel	2.0 mg/l

pH Range 6.0-8.5

Alamo Plating and Metal Finishing
Batch Treatment Log

Date	Time	Pre-Treatment Volume gallons	pH	PH-Treatment Description	Post-Treatment Volume Gallons	pH	Ni mg/l	Cu mg/l	Cr^3 mg/l	Operator
2-6-18		800	6.5	Add soda	800	7.2	.3	.12	NT	SG
2-20-18		700	6.1	Add soda	700	7.6	.3	.2	NT	SG
3-7-18		800	6.3	Add soda	800	7.7	.4	.3	NT	SG
4-5-18		800	6.6	Add soda	800	7.2	.3	.12	NT	SG
4-18-18		800	6.1	Add soda	800	7.4	.3	.4	NT	SG
5-2-18		750	6.3	Add soda	750	7.8	.4	.12	NT	SG
5-16-18		800	6.0	Add Soda	800	7.5	.3	.3	NT	SG
6-4-18		800	6.3	ADD soda	800	7.6	.3	.2	NT	SG
6-20-18		800	6.1	ADD soda	800	7.2	.3	.12	NT	SG
7-21-18		700	6.6	Add soda	700	7.4	.4	.3	NT	SG
8-7-18		800	6.1	Add soda	800	7.7	.3	.2	NT	SG
8-20-18		800	6.1	Add soda	800	7.3	.3	.12	NT	SG
9-5-18		800	5.8	Add soda	800	7.8	.4	.3	NT	SG
9-20-18		800	6.3	Add soda	800	7.6	.3	.2	NT	SG
10-5-18		750	6.1	Add soda	750	7.4	.3	.4	NT	SG

Metal Concentration Limits

Chromium	1.0 mg/l
Copper	1.0 mg/l
Nickel	2.0 mg/l

pH Range 6.0-8.5

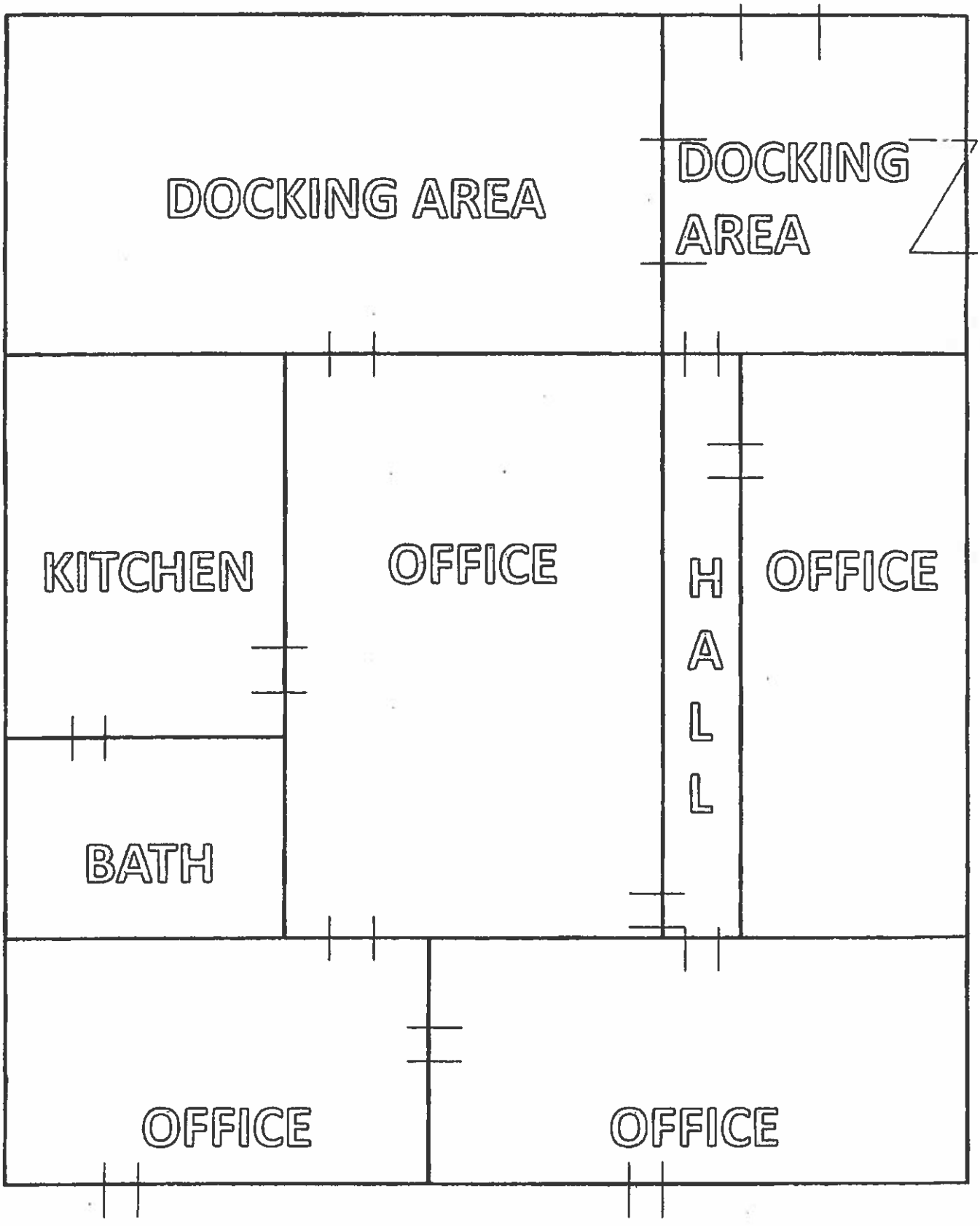
Alamo Plating and Metal Finishing
Batch Treatment Log

		Pre-Treatment		PH-Treatment	Post-Treatment					
Date	Time	Volume gallons	pH	Description	Volume Gallons	pH	Ni mg/l	Cu mg/l	Cr^3 mg/l	Operator
10-20-18		800	6.0	Add soda	800	7.7	.3	.2	NT	SG
11-5-18		800	6.3	Add soda	800	7.8	.4	.3	NT	SG
11-19-18		800	6.6	Add soda	800	7.7	.4	.4	NT	SG
12-5-18		800	6.1	Add soda	800	7.2	.3	.12	NT	SG
12-21-18		700	5.8	Add soda	700	7.3	.3	.3	NT	SG
1-10-19		800	6.3	Add soda	800	7.4	.4	.2	NT	SG
1-25-19		800	6.1	Add soda	800	7.2	.3	.3	NT	SG
2-10-19		750	6.0	Add soda	750	7.5	.2	.12	NT	SG
2-26-19		800	6.1	ADD SODA	800	7.6	.2	.12	NT	SG
3-15-19		800	6.2	ADD SODA	800	7.8	.4	.3	NT	SG
4-5-19		800	6.5	Add soda	800	7.5	.3	.2	NT	SG
4-20-19		700	6.1	Add Soda	700	7.1	.2	.2	NT	SG
5-5-19		750	6.6	Add soda	750	7.6	.4	.2	NT	SG
5-25-19		800	6.2	Add soda	800	7.5	.3	.4	NT	SG
6-8-19		800	6.0	Add soda	800	7.2	.4	.3	NT	SG

Metal Concentration Limits

Chromium	1.0 mg/l
Copper	1.0 mg/l
Nickel	2.0 mg/l

pH Range 6.0-8.5



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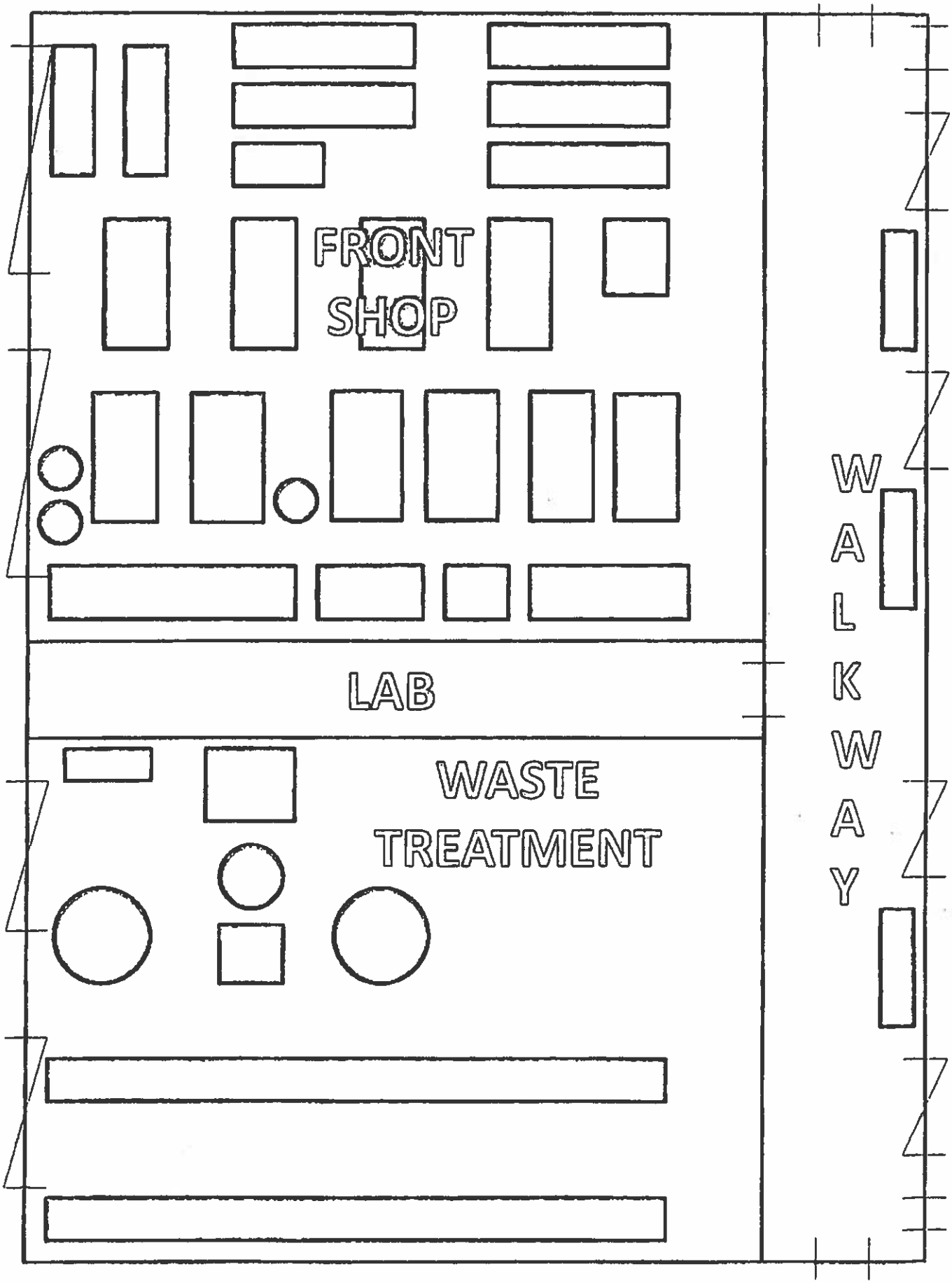
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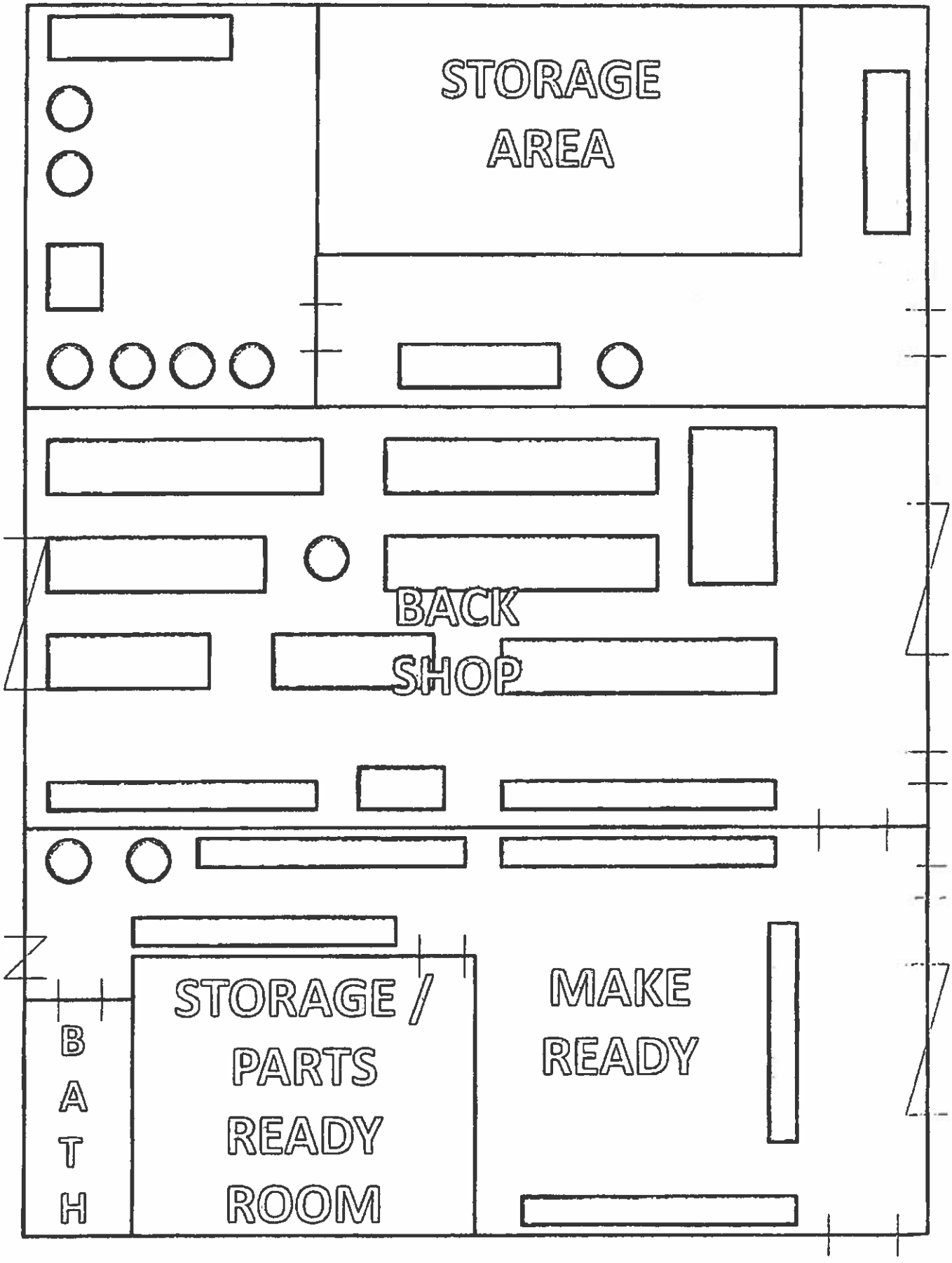
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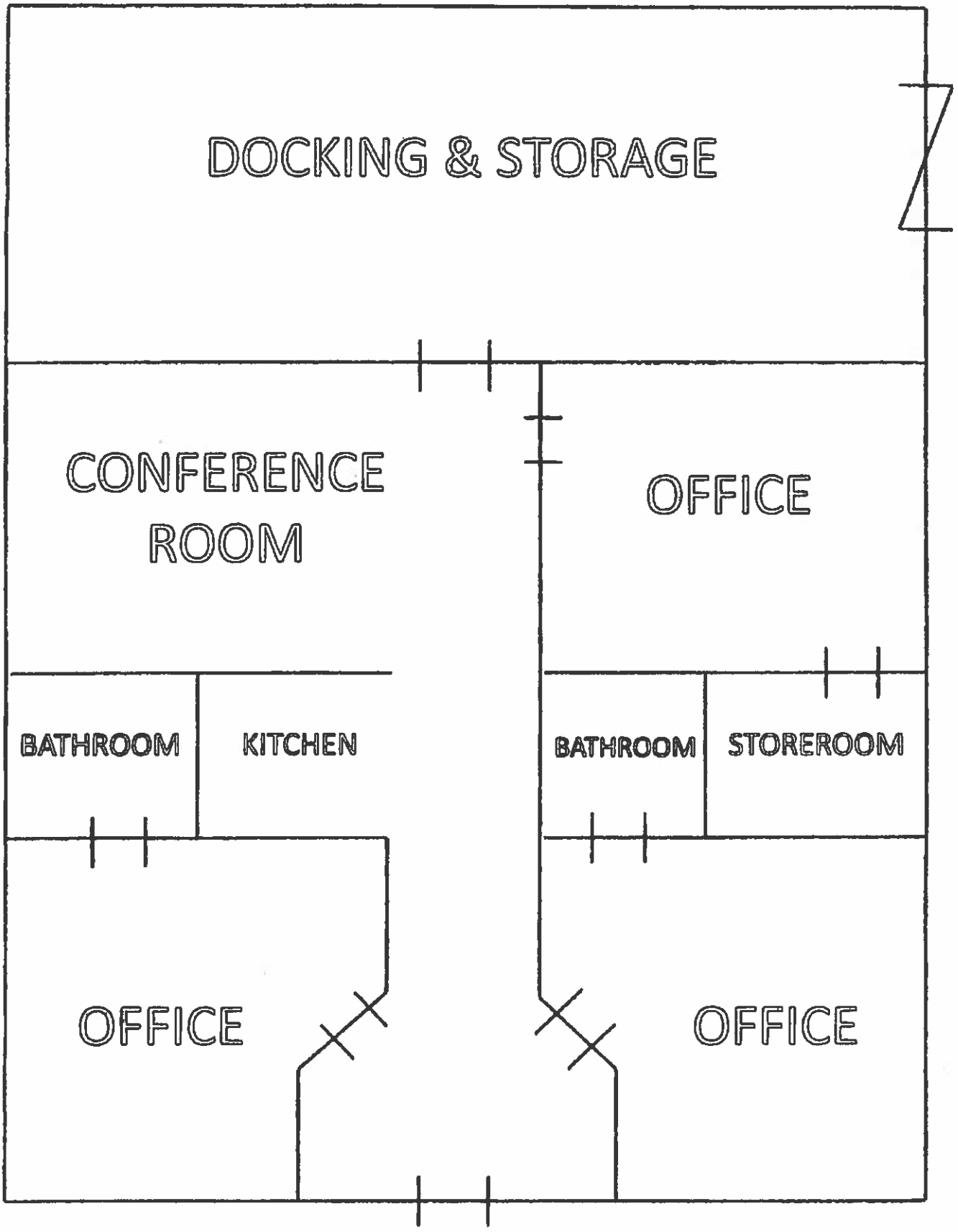
READY
ROOM
MAKE
READY



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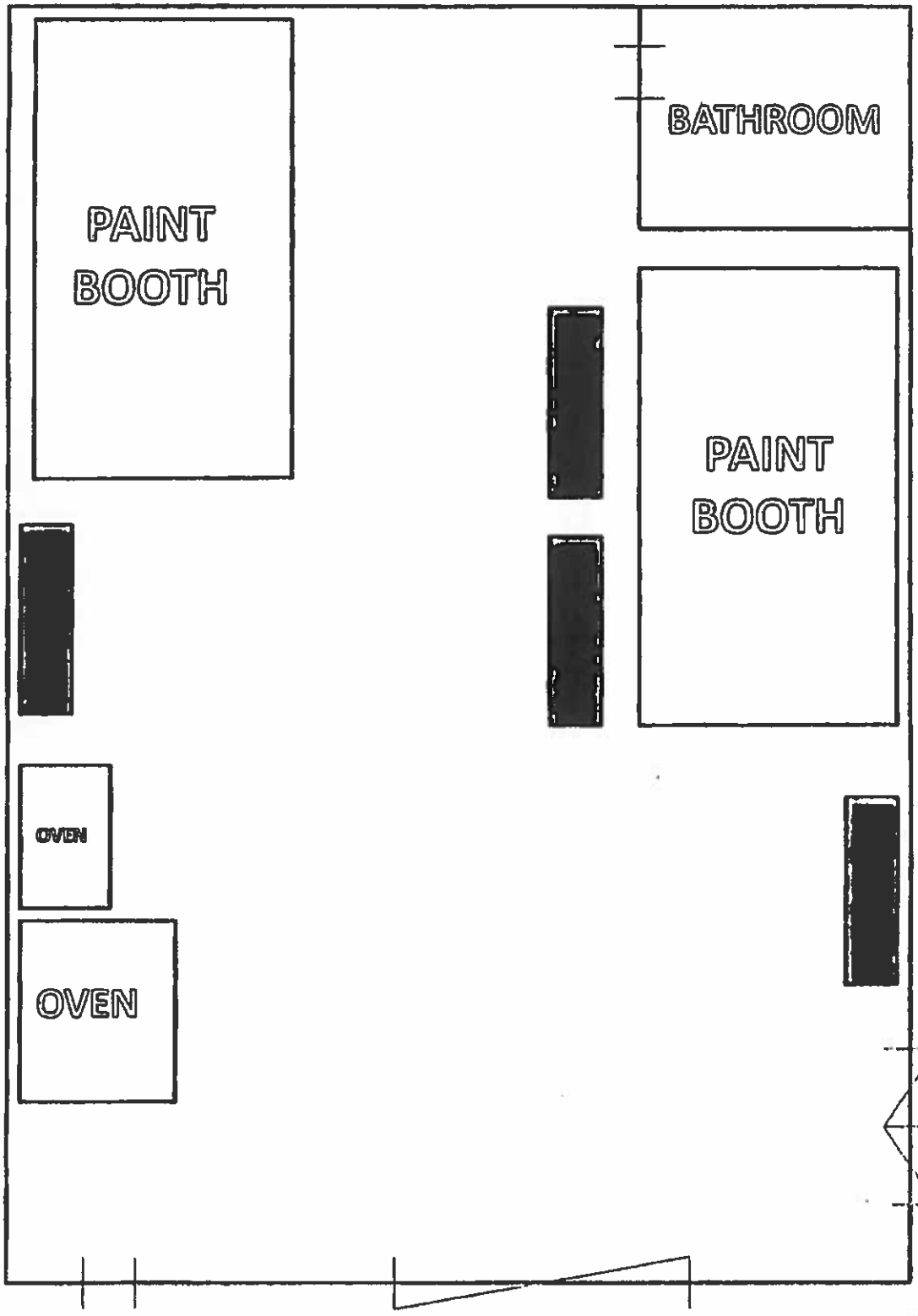
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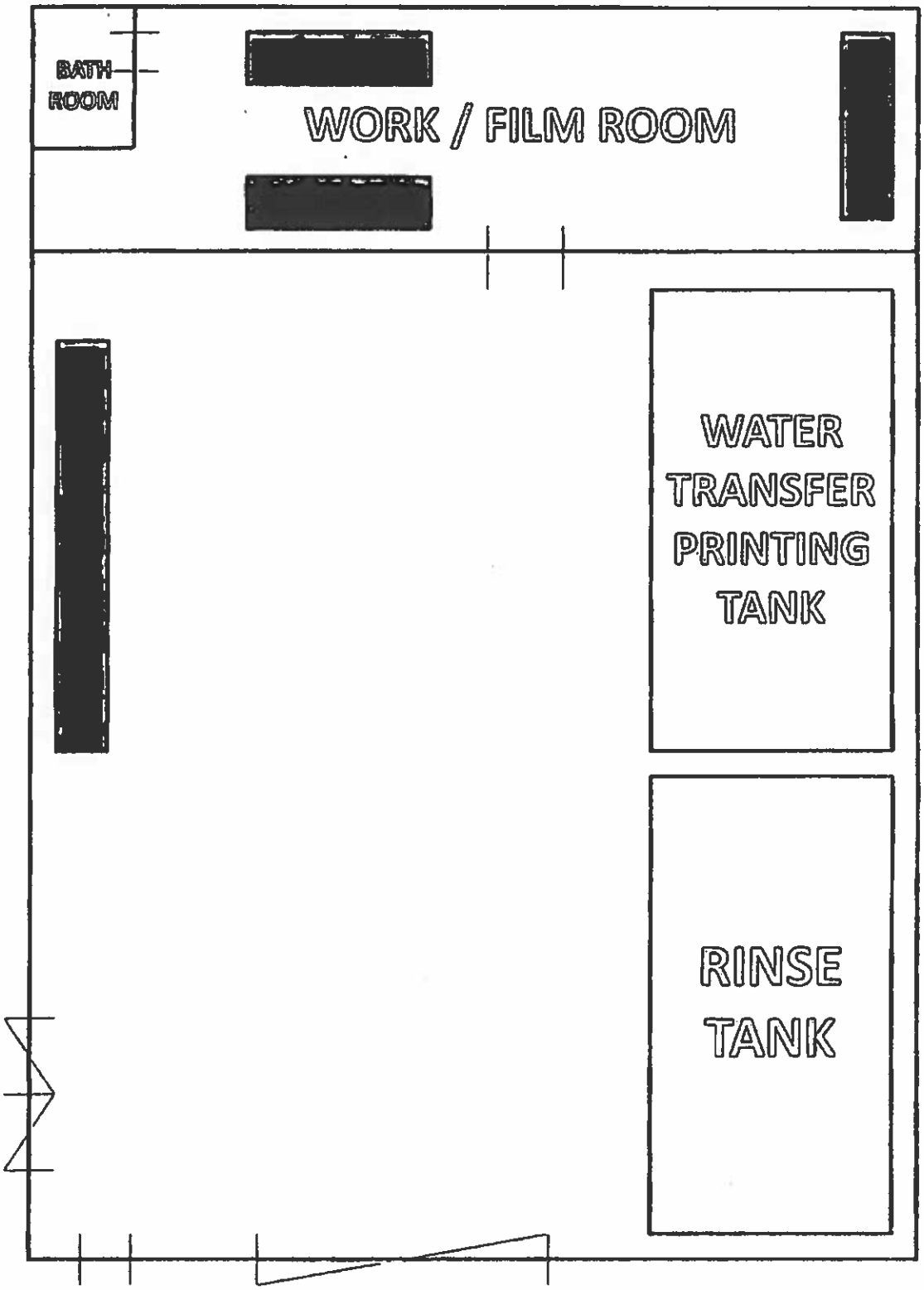
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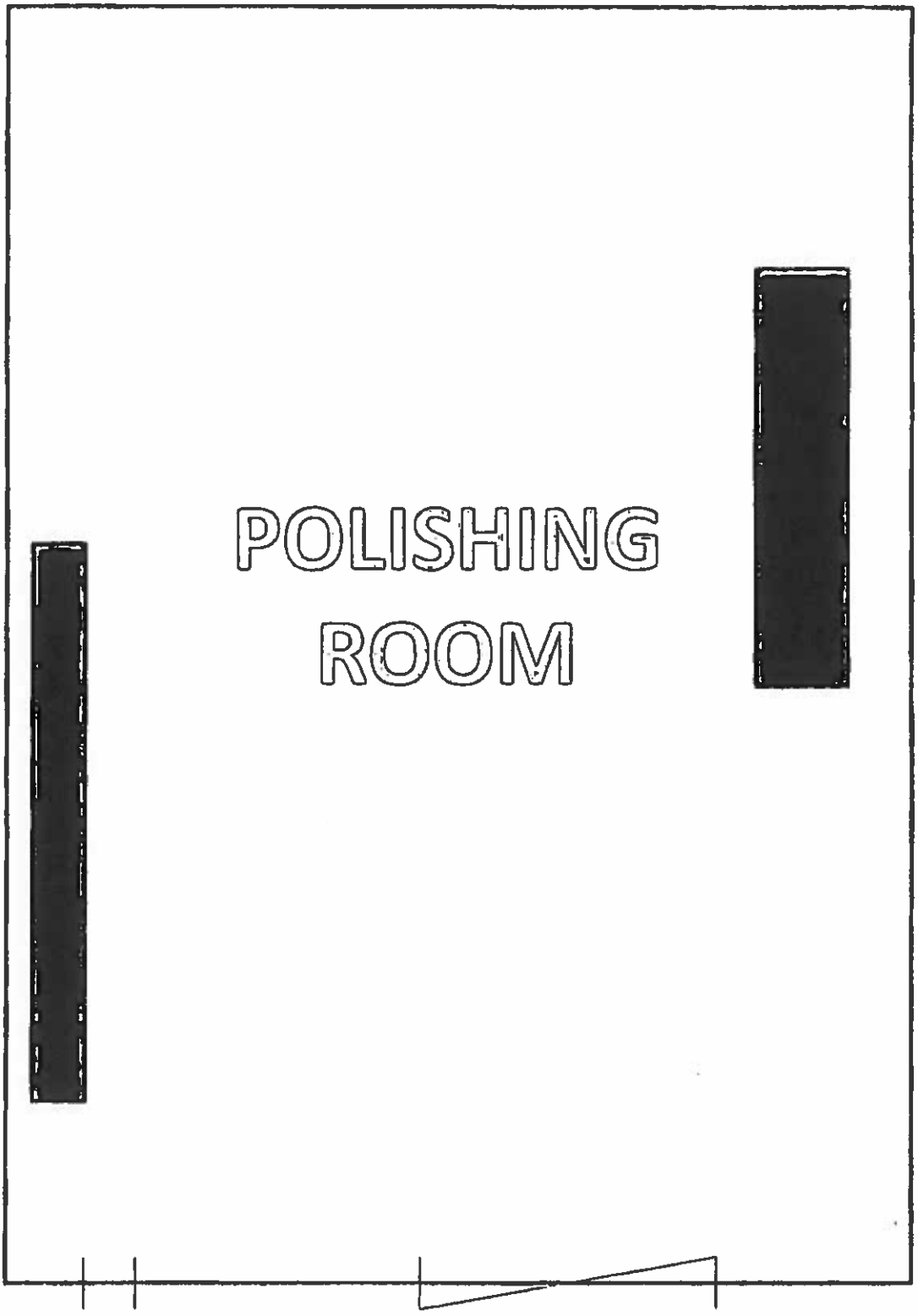
RINSE TANK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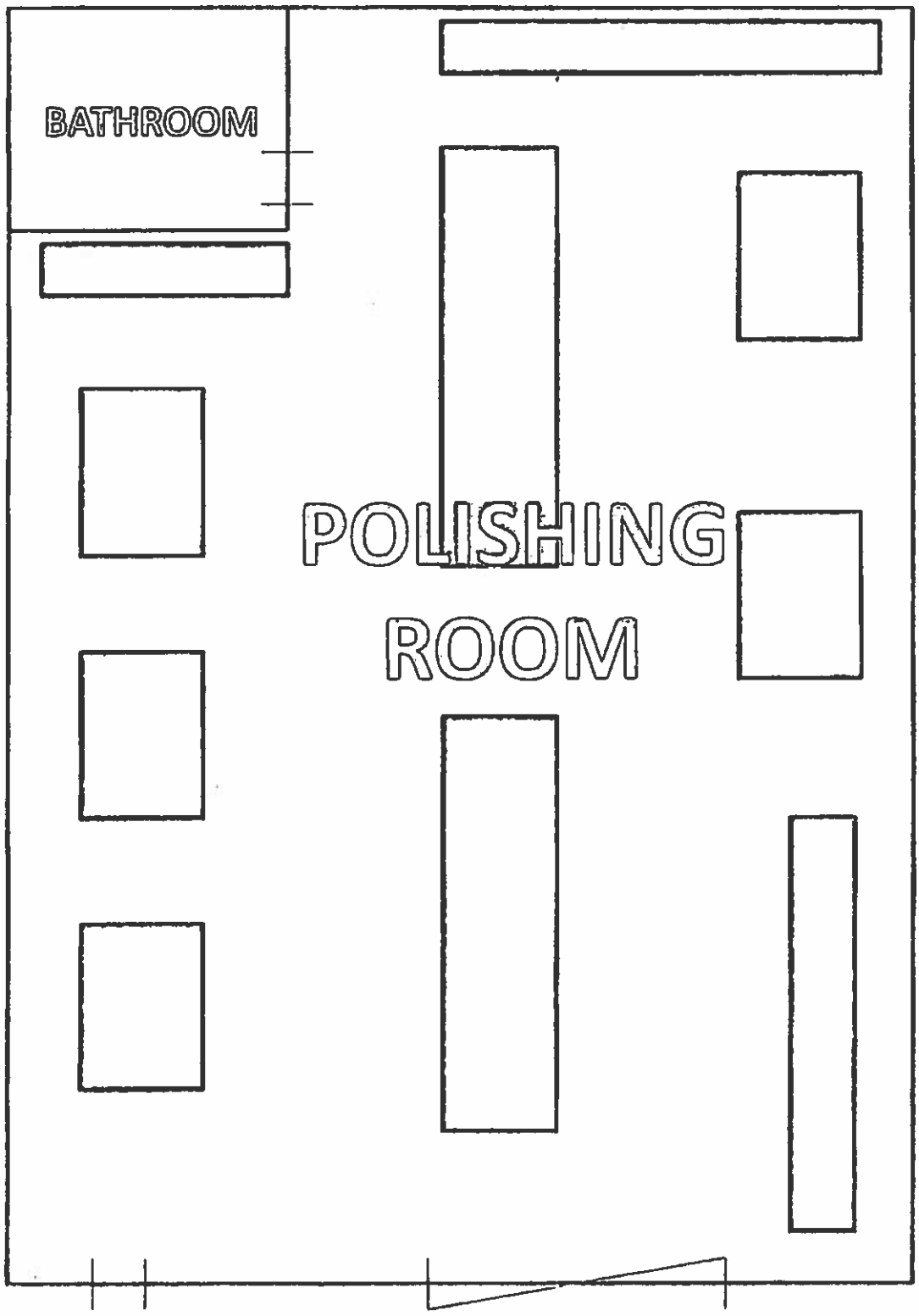
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